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GREEN'S FRUIT GROWER

The Oldest Fruit Journal in America



Charles A. Green, Editor

Rochester, N. Y.

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Green's Fruit Grower

Principles of Pruning

By J. C. WHITTEN

The season of pruning depends upon the richness of the soil, kind of tree and the vigor of its growth. As a rule, the bulk of the orchard pruning may be done in late winter or early spring, since labor is more available at this time. It is not desirable to prune when the wood is frozen hard as the wounds check and dry out deeper and the twigs of the tree are brittle so they are liable to be broken and injured more or less in getting out the pruned branches. Pruning in winter results in more vigorous growth in the parts of the tree that are left the following season; pruning in summer removes leaves and tends, if excessive, to check wood growth. If trees are shy bearers, in rich soil and going to wood growth rather than setting fruit, summer pruning in June tends to check excessive wood growth and throw them into bearing. Ordinarily commercial varieties of apples in Missouri tend to set heavy enough crops even if winter pruning is practiced. On thin soils where trees are weak, the bulk of the pruning should be done in winter. Diseased or broken parts should be pruned off when they occur at any time of year.

The open head is being adopted generally by the more successful fruit growers. A low broad spreading head with open center is more easily reached in spraying, pruning and gathering fruit. Filtered sunlight let down through the open center results in the formation of larger fruit crops low down in the body of the tree. With tall dense centers fruit is largely shaded out of the body of the tree and is produced only higher up. Spraying can be much better performed with low spreading, open head.

The tree should have three to five main scaffold limbs extending outward. These limbs should be spaced so they will not form forks by growing directly opposite each other.

The open head may be still further secured by pruning back upward growing limbs to an outward growing side branch while the tree is young. Any large main branches that tend to form in the center should be removed before the tree reaches bearing age. It is not wise to thin out all the small, lower and inner branches, however, at first. These small branches will be the first bearing wood on the tree. As many of them should be left as can get sunlight and air enough to develop fruit. Even surplus branches within the tree may be left a year or two while they are small, as their leaves will digest plant food, help to lay on a thicker growing layer on the trunk and root system and will result in a stockier tree. Small leafy twigs that form low down then may serve a very useful purpose in nourishing the tree for a time even though they grow where some of them will have to be removed later.

In pruning off a limb cut it close to the main branch or body of the tree to which it is attached. If a knot is left the wound will not quickly heal over; if cut close so as to leave no knot, the new growing layer can quickly close over the wound. The wounds heal better, if cut with a sharp knife or keen saw. A ragged wound made with a dull tool dries out and heals less rapidly.

Paint all wounds more than one-half inch in diameter as soon as possible after pruning. Common white lead and oil paint is probably the cheapest and most serviceable wound dressing. Canker and other trunk diseases usually get in through wounds which are not painted, or which do not heal quickly.

Peaches should be pruned much more severely than other fruits. From one-third to one-half the quantity of new wood growth should be pruned off each winter. Prune as severely as possible—just so one leaves enough new wood growth to carry a full crop of fruit. The peach sprouts readily from old branches and fruit buds will form on the new wood. For that reason, pruning severely enough to result in rank new growth does not throw the tree out of bearing.

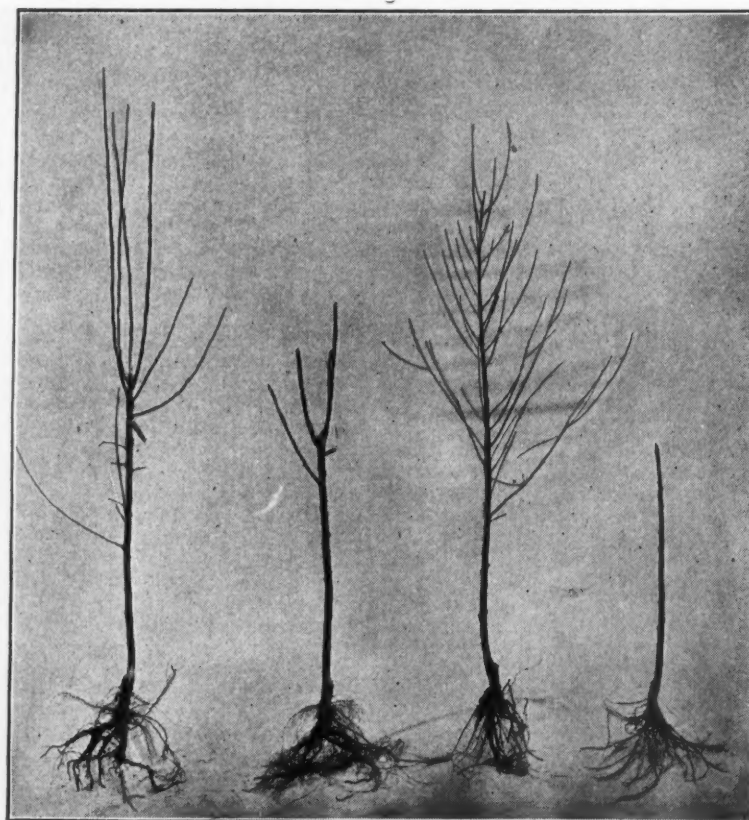
Cherries should be pruned the least of any of our orchard trees. They do not sprout readily from old parts. They make their growth from buds at the tips of the limbs. For that reason the limbs of cherries should not be cut back much in pruning but surplus limbs should be thinned out. Prune only just enough to prevent inner growing branches from crossing each other and interfering and just enough to open the center of the trees and admit sunlight enough to develop fruit buds and fruit.

Apples, pears and plums should be given an intermediate degree of pruning between the peach and the cherry.

The main frame work of the tree should be shaped

mainly before the tree reaches bearing age. This is true in the case of all species of fruit trees. If proper pruning and shaping is done while the tree is young, the pruning problem will be less troublesome and less expensive in later years.

The purchaser of nursery stock must have confidence in the nurseryman. Frequently he cannot tell whether a tree is an apple or a pear—much less what variety it is, or whether it is a well-grown specimen for its age. The determination of all these points demands expert knowledge, which few purchasers of nursery stock possess. The price is the one thing the purchaser realizes; the value of the purchase he often fails to determine. Trees of the same variety, size, and appearance may vary in value because they differ in age. If there is a local nursery and the owner is of good repute, it is generally one of the safest places to go. There grows up an interchange of confidence which is necessary in all business. Failing this, one may take an expert along and visit the blocks of trees in a nursery and have the same expert inspect the trees on arrival; or the still more common method is to deal with a reputable firm, pay a fair price—that is, a price which leaves a living profit



Apple and Peach Trees
Showing them as they were received from the nursery and as pruned for planting

in the hands of the nurseryman—and rely on his integrity. The man who regards price as the index of value usually gets the low price and goods of a value equivalent to the price, says N. Y. State Bulletin 79. The nurseryman who sells at cost, or says so, is a knave or a fool, and in either event you do not want to deal with him. There are a number of reputable nurserymen in all parts of New York, who are anxious to conduct a clean and honorable business, and the purchaser needs to approach them in the same spirit.

Gardening With Green Manures

Professor R. L. Watts of the Pennsylvania experiment station, says the potato growers of Freehold, New Jersey, have managed to produce most excellent crops for many years without the application of stable manures and by following a short system of rotation. Many growers in that section have grown potatoes on the same land year after year, following each year with crimson clover which is plowed down in the spring. In some instances the soil has become so rich in the nitrogen derived from crimson clover that the growers have been forced to abandon the use of this legume and substitute non-legumes, such as rye and wheat. Thousands of truckers in New Jersey

depend solely upon cover crops and green manures to maintain the vegetable matter of the soil, thus clearly demonstrating that with good management a profitable line of cropping may be followed without the use of stable manures. Commercial fertilizers must be used in proper amounts.

Strawberry Culture

By Prof. F. A. WAUGH, Mass. Agricultural College

Any land which will produce good garden crops, especially good potatoes will answer for strawberries. It is considered bad practice to plant on newly broken sod land. If strawberries can follow corn, celery, tomatoes or other well cultivated garden crops, good results may be expected, says "Mass. Bulletin, No. 4."

If the plants are to be put out in spring, as is the usual practice, the land should be deeply plowed in fall and left to weather through the winter. The importance of beginning with strong vigorous one year old plants cannot be too much emphasized. It is highly important to observe in setting plants that they be not placed too deeply in the soil, nor yet too shallow. The correct position is to have the bud or crown exactly at the surface.

The cultivator should be kept going between the rows, especially in dry weather. Such cultivation should follow one another every week or ten days. Some soils of course require more tillage than others.

The plants should be protected through the winter by a covering of mulch. This mulch is raked over the rows in spring as soon as the snow is off, allowing the plants to grow freely. Various kinds of material are used for this mulching process. Anything which is clean, not too full of weed seeds and will lie closely on the ground will answer the purpose. This mulch should be put on late in the fall, after moderate freezing of the ground.

In marketing the strawberry it is a good practice, especially where a good grade of fruit is grown; to sort all the berries, facing up each quart box as apples are faced in barrels. This does not mean that small berries are to be put in the bottom of the box, but simply that the fruit is to be made to look as attractive as possible. The most satisfactory way to sell berries is in the home market, direct to one's own customers.

City Men on Farms

It would be really valuable information if the actual results could be gathered and published. Undoubtedly there are a great many people living in the cities who would be better off in the country and who could make a healthier and more acceptable living on farms than elsewhere, but by the same token it is not every man who can make a success of farming. It is one thing to read about it and another thing to do it. The amount of work involved is something prodigious. The sun and the showers which help the crops also have a similar influence on the weeds and the man who tills the soil must be on the job from early dawn till dewy eve. More than that he must know the business just as a carpenter, mason or plumber does, and the best possible apprenticeship is to serve for two or three years as a hired man. That may take the poetry out of it, but in the parlance of the street it will enable the learner to get down to brass tacks and tell him more that is worth knowing than he can get from any book. The farmers who have good business ability, industry and manual dexterity are the ones who get along the best, but as the paragraph above quoted suggests, there is something to farming beside the reading of Tennyson.

Pruning Flowering Shrubs

Shrubs that bloom in the spring before they have made new growth bear their flowers on the wood of last year. Therefore, if you prune in the spring you are cutting off the flowering wood. Prune these right after blooming so as to make new wood for next season. Shrubs that bloom in summer and fall produce flowers on the new wood of the current season. These must be trimmed early in the spring so as to produce new wood before the flowering period arrives.

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What to Plant for Profit

By THE EDITORIAL STAFF

The successful commercial fruit grower is easy to approach for information because he is an enthusiast. He has arrived. He knows every step of the ground which he has covered and gives a reason for every statement he makes. His experience means much more than haphazard success. It covers experiments and in many cases it covers a failure; but his ability to discover the cause of the failure may be the road which led to his ultimate success.

Cherries and Apples

In giving his experience as an apple and cherry grower, Mr. Harry Lasher of Wayne County recommends the Montmorency Cherry for the main commercial crop. The young trees are set 20 feet apart, and he does not interplanting in this orchard. After the pruning, at planting, these trees are not pruned again for five years. When three years old he cuts out all the cross limbs. This also prevents black knot which the rubbing of the limbs encourages. These trees are sprayed with lime and sulphur and begin bearing in quantities sufficient to market at four years.

Ten year old trees should average at least 80 pounds of fruit to a tree. They are sold by contract to canning factories at a price netting two cents per pound above picking and hauling.

Mr. Lasher's picking organization has been greatly strengthened by having a sweet cherry orchard of five hundred trees. These ripen before the Montmorency and the season is prolonged by the English Morello which ripens later. Following this plan a longer picking season can be promised. This lessens the labor problem.

Mr. Lasher has worked out an original plan of planting the English Morello Cherry with the Rhode Island Greening and King Apple, thus securing an early and a late crop from the same land. These trees are all sprayed with the same spray material at the same periods. He recommends the Rhode Island Greening because it is generally well known, it commands a high price and is rapidly growing in favor as an all-around apple for cooking, baking and eating. It is not as distinctive a biennial as the Baldwin, and he is further reasonably sure of at least one apple crop because the King is an annual bearer and on account of its size, a splendid seller. In the accompanying diagram

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X - X

which illustrates Mr. Lasher's planting plan, "X" represents the Rhode Island Greening, "O" the King Apple, and "—" the Morello Cherry. The features of combining these two varieties are, that they shed their bloom at the same time, making it possible to spray both at once; the Kings can be picked immediately after the Greenings; which would not be possible with a later ripening variety; and both varieties are off the trees before fall windstorms come. A light dry loam is the soil best suited to cherries.

Among the best known commercial apple growers of Western New York are Collimer Brothers of Hilton. While they grow the 20 oz. Greenings, Baldwins and

Alexanders, they find their soil especially adapted to the 20 oz. which does not do so well in all localities. They plant the Baldwins and Greenings 45 feet apart. The 20 oz. and Alexanders, 35 feet apart. The latter begins bearing from 8 to 10 years, while the Baldwins and Greenings bear at from 10 to 12 years.

Peaches.

Mr. F. W. Cornwall, Shore Acres Fruit Farm of Pultneyville, N. Y., has been growing peaches for 16 years. He began with the Late Crawford, Champion, Fitzgerald, Carmen, Lamont and Elberta. Today he is only planting Elberta because it is a steady cropper, most productive, a good shipper, and brings more money in the market.

Mr. Cornwall sets his trees 18 feet apart, heads them low so that they may be picked from a six foot step ladder and packs them mostly in bushel baskets, because it is the most economical package and brings more money in the most of the big markets. He believes that a good commission man, who is an expert salesman, can get more

cause the trees are apt to crowd some at 15 years of age. He prefers clay loam soil with a limestone base which furnishes the necessary potash for fine fruit and does away with the necessity of using commercial fertilizer.

The trees begin to bear profitably at 7 years, provided interplanting ceases the third year.

Mr. Babcock emphasizes the necessity of placing the fruit in cold storage immediately after it is picked. He has established a trade in New York and Philadelphia and his Banner Brand Fancy Pack is much sought for.

Under favorable circumstances, a pear orchard will average \$200.00 per acre and under special conditions much more.

Mr. David K. Bell of Brighton, N. Y., who is widely known as an expert grower of pears and plums believes in a prolonged fruit season. While he does not consider Clapp's Favorite a pear of the best quality, he finds it a good seller as an early fruit. This is followed, in the market, by Bartlett which is universally well known and

one of the most profitable commercial varieties grown. Its most serious drawback being the susceptibility to blight. The Seckle, which is medium late, is well known as a dessert pear and follows the Bartlett. It is most productive and should succeed everywhere in the United States except along the Atlantic coast beginning with New Jersey, extending through the southern states, the Mexican border states, Montana, Wyoming and Dakotas.

Bosc is a good canner and delicious as a dessert pear. It is in demand in most of the large markets. It should be top worked on a strong variety such as White Doyenne or Doyenne Boussock, but never with Keiffer.

Winter Nellis and Anjou are Mr. Bell's best winter pears. Nellis is at its best in December or January when kept in ordinary storage. The Anjou would be the most desirable and profitable winter pear, were it not for its size which gives it a tendency to blow off in the September winds, but when well grown it commands the highest price in the market.

Plums and Prunes

Among the many plums and plums which may be planted Mr. Bell believes that only those of the highest quality and those which therefore command the highest market price are profitable commercially. He advises planting the German and Italian plums which should be left on the trees until thoroughly ripe. This is very important because, if picked green they lack the sugar, which only comes in plums by letting them ripen on the trees. The Italian prune is larger and earlier than the German prune but not so prolific. Shropshire Damsen, Bavays Green Gage and Bavays Reine Claude are plums of excellent quality and are good sellers.

Much confusion has arisen over a so-called "French" prune. Mr. Bell, who is an authority, says there is no "French" prune in existence. The Fellenberg is Italian.

The trees in his pear orchard are planted from 20 to 25 feet apart and the plums about 20 feet apart.

Most orchardists do not advise interplanting of currants and raspberries because they provide such excellent

(Continued on Page 5)



In Mr. Bell's Orchard. A Row of Shropshire Damsen Plums at the Left and German Prunes at the Right

money for his peaches than he himself could get, because of the commission man's knowledge of market conditions.

Peaches do best on a sandy or gravelly loam and if well cared for may be expected to commence bearing at from three to five years, giving an average profit of from fifty to seventy-five dollars per acre and yielding from five years up to fifteen years old. Mr. Cornwall believes that commercial peach orchards, planted under unfavorable soil conditions, do not pay sufficient interest on the investment to warrant setting out the trees.

Pears

A. Emerson Babcock of Rochester, N. Y., began his pear orchard with Bartlett, B. Clairgeau, H. D. Anjou, Seckle and Keiffer, but believes from his experience that the most profitable pears are the Bartlett, Bosc, B. Clairgeau and Seckle, which is not only commercially profitable, but a most excellent cross fertilizer.

Mr. Babcock's orchards are planted 20 by 18 feet and he believes this distance better than 20 by 16 feet be-

Protecting Apple and Pear Trees

By F. H. SWEET, Va.

As apple and pear blight and some other diseases seem to be gaining ground in many localities, it might be well for orchardists who have even a few trees to take stock of their condition with a view to combatting these enemies if they are in his orchard.

Twig blight of the apple and pear is very common throughout the country, and in some seasons, is very disastrous. It has two prominent manifestations, one starting in June or early July and continuing throughout July and August, the other starting in the blooming period and continuing throughout May and early June. The first form manifests itself by the dying back of the tender growing shoots from the tips downward, in some cases, to the extent of three or four feet, destroying branches frequently an inch or more in diameter.

The measures against it are almost entirely preventive, as it is very difficult to cure for that season once it has gotten into an orchard. It is caused by the bacteria of the blight disease getting into the tips of growing twigs when the growth is very sappy and immature. During a hot, wet, growthy season its development is more rapid than when the season is dry and the trees grow slowly. Since it attacks the immature growth it is natural that the best way to combat it is to mature the wood growth. This form of blight is not prevalent in sod land nor excessively so in the first season of cultivation, but if the second season is very wet and growthy, severe blighting is liable to ensue. Some varieties are more susceptible than others, the York Imperial being especially so, while other varieties are almost immune.

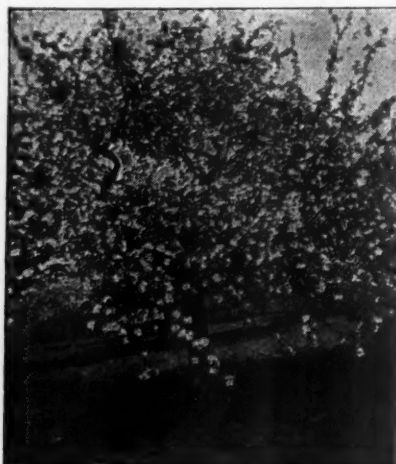
Since it is only on the new, sappy growth that this blight gets in its work, the preventive measures consist in checking or maturing the growth. This may be done for you by a load of fruit if your trees have reached bearing age or you may stop cultivation and return the orchard to sod for a few seasons. Probably the best method, however, is to make a liberal application of acid phosphate fertilizer to the soil around the trees and then leave the orchard in sod for a year or so afterward. This causes the growth to mature without materially checking it, and strengthens the tree as well. Barnyard manure should never be applied to trees having a tendency to blight, except during a dry season when the trees are loaded with fruit and no blight is apparent.

As a remedy for the blight that is already in your orchard, the best procedure is to cut out all blighted twigs some eight or ten inches below the blighted portion and burn them. This will not prevent the blight from breaking out in other places, but it prevents it doing further damage to the limb thus treated and removes a source of infection.

The second form of blight attacks the bloom, blighting it and the twig on which it grows. By attacking the bloom clusters it may destroy the entire crop, and in some extreme cases actually does so. At best it does severe damage. It is caused by the spores of the blight spreading from the blight cankers in which it winters over on the trees. A canker is formed by the blighting of some twig back on the limb on which it grows and onto the surface of the limb itself. A watersprout on the trunk of the tree may blight back and cause a canker on the trunk. In the

spring these cankers exude a sweetish sap that the bees suck, and going from bloom to bloom spread the disease broadcast. The treatment consists in carefully cutting out these cankers and disinfecting them with bichloride of mercury in the strength of about one part to one thousand parts of water.

Cankers on apple trees are caused by several different



fungous diseases, black rot, bitter rot and the bacteria of the blight disease being among the most frequent sources of infestation. A canker can be easily recognized by its appearance. It usually has its start in an insect sting or wound of some sort, and instead of healing over normally the bark dies back each year, forming a series of rings about the original wound. At any time that the bark is seen to be dead or dying back, however, it is well to treat for canker. The writer has seen cankers start from a wound on the body of a tree and spread over the tree limb by limb until the whole tree was destroyed.

The treatment for cankers consists in carefully cutting all the diseased portion throughout with a strong (1 to 4) solution of lime-sulphur or bi-chloride of mercury, care being taken to disinfect the knife thoroughly as well. After the wound has been disinfected, carefully paint the whole exposed surface with pure white lead and pure linseed oil mixed to a thick consistency. This prevents cracking. The above treatment is simple, easy and inexpensive, and, if thoroughly carried out, will be the means of saving many valuable trees to the owner.

Crown gall and collar rot are two very insidious diseases, both of which occur at or about the point at which the trunk and roots join. Crown gall is a warty, hairy growth that occurs usually in or just above the upper branching of roots and spreads around the tree at that point, in many cases killing the tree. This disease is especially treacherous, as it will allow a tree to become

13 or 14 years old, and will kill it off just as the owner is expecting some returns from it. A very healthy tree will frequently outgrow crown gall, and really the best thing that can be done for an infected tree is to fertilize it and cause it to become strong and vigorous.

Collar-rot is the dying of the bark around the tree from the roots up to six or eight inches above the ground. It may occur at any stage of the tree's development, but it has been the writer's experience that it occurs most frequently between the ages of 4 and 16 than at any other time, and is more frequently found on Grimes, Yorks and Spitzenbergs than on other varieties of apples. Some attempts have been made to cut away the dead bark, disinfect the exposed surface and bridge-graft over it, but these attempts have not so far been successful enough to warrant advising the orchardist to undertake it.

For both crown gall and collar rot the measures are mostly preventive. A tree that has a knot of any kind on the root should never be planted unless the grower knows positively that the knot was not caused by crown gall. And in worming the trees always have the men who do the work provided with a bucket of strong lime-sulphur, and see that they thoroughly wash the entire portion of the tree that they have worked over, and especially all wormholes or wounds; and, if they find a spot of dead bark, have them cut it out and disinfect the wound. These measures will go a long way toward preventing the spread of these very dangerous diseases.

It is a good plan to carry a bottle of strong disinfectant and a bucket of paint whenever pruning or worming the trees, and to cut out and disinfect every spot of dead bark, and to disinfect and paint every wound of any size, either on the trunk or on the limbs of the tree, and to disinfect the knife whenever it has come in contact with dead or diseased bark. A man should be just as careful in performing a surgical operation on a tree as he is on an animal or another man, and, if he consistently pursues the line of action laid out in this article, it will be possible to keep the orchard comparatively free from these diseases, preventing much loss to the owner.

Nature's Insect Destroyer

In a plea for the bobwhite, W. L. Nelson, Assistant Secretary of the Board of Agriculture, states that a count of the seed in one bird's crop revealed the presence of about 10,000 pig-weed seed, and bobwhites are known to eat at least eighty-five kinds of weed seed. For meat he chooses among fifty-seven kinds of beetles, twenty-seven kinds of bugs, nine kinds of grasshoppers, thirteen kinds of caterpillars and a variety of ants, flies and wasps. One bobwhite has been known to eat as many as 5,000 plant lice in two hours, and he is fond of bollweevils, chinch bugs, cabbage worms, cucumber beetles, squash bugs, army worms and Hessian flies.

And yet there are farmers who are willing to have all the bobwhites on their farms killed. Shooting the hired man would be more logical. The hired man demands wages, while the bobwhite works for nothing.—St. Louis Republic.



Blossom Time in a Well Cared For Orchard

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All reason second just el am sal either well af is neces do it.

I have who has modest mortga of instal that th season p grower g Seabrook rigating land whi and prac had irrig doubled with land Seabrook ting fifty this season.

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The cost than \$18,00 capacity to 21,000 nozz for farm No the entire 2 disturbing th Strawberry

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Success wi market. Loca set small plan soil and care, thing that ca as for strawb large planting are not advisa growers locate manufacturing than a decade c from quarter a berries. One c his methods, wi Rural Life.

The blackbe where and in a wild berry, but much larger an that grows in holds true wit general it may tion for the b gently sloping southern expos rich and somew are not desirabl age is poor an about the roots cause winter-k loan should be tentative of moist the berries are r It is well to p

Does Overhead Irrigation Pay?

By FRANK E. BEATTY

All growers cannot install overhead irrigation for two reasons. First, on account of an insufficient water supply; second, on account of the lack of money. But I have had just enough experience with overhead irrigation that I am safe in saying that if a grower has a water supply, either through wells or from a creek, river or lake, he can well afford to install overhead irrigation, even though it is necessary for him to mortgage his land to do it.

I have in mind a grower at Elkhart, Ind., who has only five acres of land and a very modest home. This grower told me that he mortgaged his land and home for the purpose of installing an irrigation system. He found that the increase in his profits the first season paid off this mortgage. This particular grower gets his supply of water from a well. Seabrook Farms in New Jersey are now irrigating approximately one hundred acres of land which is used principally for vegetables, and practically every year since they have had irrigation their crop has been more than doubled on the irrigated land as compared with land which is not under irrigation. The Seabrook people now are planning on putting fifty additional acres under irrigation this season.

I want to tell you that it is mighty fine to be able to make rain just when the crop needs it. We now have 65 acres equipped with an Overhead Irrigation System. The underground piping is cast iron, the same as is used in city water systems, and galvanized piping is used for the risers and overhead portion of the system. The water is drawn from the Portage River, which flows along one side of our farms, by a single-stage centrifugal pump, having a capacity of 1,200 gallons per minute. The pump is directly connected with a 75 H.P. three-phase electric motor. All the piping in the main line is ten-inch. This size pipe extends from the river through the center of the farm, and branches extend from the main line through the fields. The size of these laterals is six-inch and four-inch.

The cost of this complete installation was a trifle more than \$18,000. It required fourteen cars loaded to full capacity to deliver the pipe and fittings alone. More than 21,000 nozzles are used. We are now unloading piping for farm No. 2. The main lines are so constructed that the entire 225 acres can be put into this system without disturbing the main line.

Strawberries are about 97% water, and I know of no

better way to furnish this water just when it is needed than by the overhead system. Before putting in our first installation I corresponded with many agricultural colleges that had made experiments with many different systems of overhead irrigation, and practically every one of them unhesitatingly recommended the system we have adopted. For further information, I wrote to a number

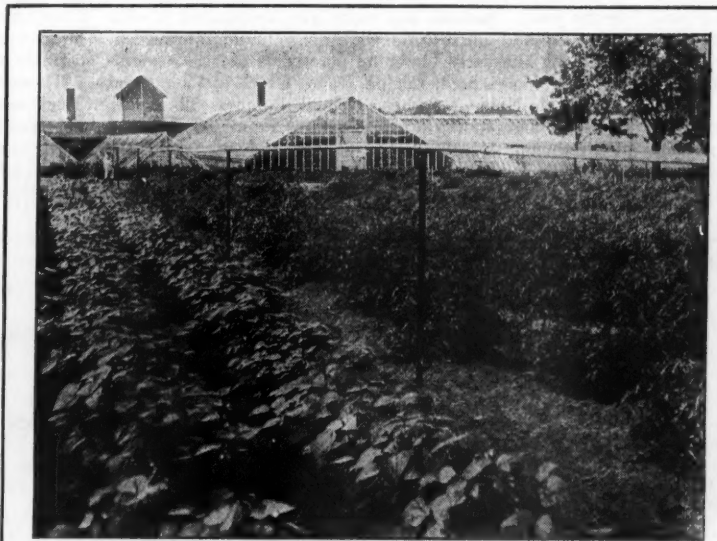
ty-five to thirty feet into the air, where it bursts and falls upon the plants in the form of a fine mist. By the time the water reaches the plants it is the same temperature as the atmosphere. For this reason we can irrigate when the sun is shining brightly, as well as at night. The only difference is, there is a greater degree of evaporation during the heat of the day than at night.

Our Idaho farms are all irrigated from ditches through corrugations. When ground is filled with building material, properly cultivated and irrigated, the grower has full control. In two different seasons I have succeeded in getting more than 500 bushels of high-grade potatoes per acre from a large acreage. I also have grown in Idaho, in two different seasons, more than 94 bushels of oats per acre. Last season I had alsike clover that made 20 bushels per acre. These yields were made possible because the soil there shows a very high analysis in phosphorus, potassium and lime and because we have the sunshine and water.

Some growers claim that lime is injurious to strawberries. I would like to have those growers go to Idaho, where the soil analysis shows five per cent lime, so they might learn that strawberries are very successfully grown in such soil, when the other necessary essentials are present. For some years I have been growing strawberries and other crops extensively in Idaho, and it was my experience with irrigation in that state that led us to equip our Michigan farm with irrigation. I would rather have five acres of land well irrigated, than to take my chances on twenty acres without irrigation. The grower who is prepared to irrigate is the fellow who controls the market in dry seasons, and it is in such seasons that growers who irrigate make the profits you read about.

More than that, the strawberry grower who has access to an abundance of water can well afford to install an irrigation plant, for I wish to say in closing that we are just beginning to learn how to build and to sell fruit. And, I wish to go on record as expressing the conviction that within the next decade the progressive fruit grower will double both the quality and the quantity of the fruit he produces, and that intelligent bud selection and restriction will perform a very important part in this development of strawberry interests.

Keep borers and codling moths out of the orchard.



Photograph showing method of applying water to outdoor plants in the vegetable gardens about Rochester, N. Y. These elevated water pipes have holes on each side from which the water is pressed with high pressure and thrown over a space of 12 to 15 ft. on either side. There are several lines of these elevated irrigating pipes running through the fields.

of growers who had used this system for years and they informed me that irrigation seldom failed to pay the entire cost with the increase of the first crop, and in a dry season the increase was still greater. We have our present system arranged so that we can divide it into three equal units, of a trifle over twenty acres per unit, as our pump and motor will furnish sufficient water to irrigate this number of acres at one time. In four hours we give our plants a half-inch rainfall, and in twelve hours the entire 65 acres have had a stimulating shower bath.

The system we use throws the water through fine nozzles. The water is thrown from these nozzles about twen-

Success With Blackberries

Success with blackberries depends largely upon the market. Locations near a thriving city are good places to set small plantations, and, given the proper conditions of soil and care, they will bring as large an income as anything that can be grown. The demand is not as heavy as for strawberries and raspberries, hence large plantings, except near large markets, are not advisable. There are several small growers located near certain New England manufacturing cities, that have for more than a decade of years, been piling up profits from quarter and half acre patches of blackberries. One of these growers has given us his methods, which are here appended, says Rural Life.

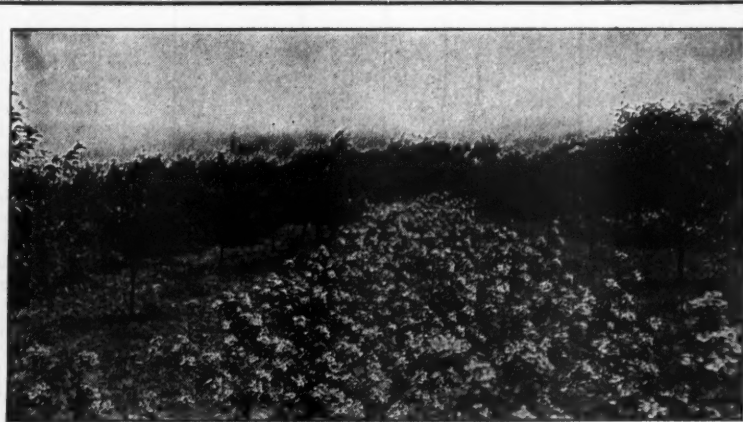
The blackberry will grow almost anywhere and in any soil. This is true of the wild berry, but everyone has noticed how much larger and more juicy the berry is that grows in moist ground. The same holds true with the cultivated fruit. In general it may be said that the ideal location for the blackberry plantation is the gently sloping hillside, with eastern or southern exposure, where the loam is deep, rich and somewhat sandy. Stiff clay soils are not desirable for the reason that drainage is poor and water is liable to stand about the roots during the winter. This causes winter-killing. On the other hand the sandy loam should be underlaid with a soil that is naturally retentive of moisture, as water is absolutely necessary when the berries are ripening in August.

It is well to prepare the ground with care, and no mis-

take will be made if a plot is selected that has had two or three years of cultivation. Thus land where potatoes, cabbage or some other crop that requires a good deal of cultivation, have been grown is in a good state to receive the young canes. A good coat of stable manure plowed in

worked. If the canes are set in the fall an "open" winter may work harm with them. If we were sure of plenty of snow it would be better to set in the fall, but several freezings and thawings will kill the young plants. Cut back the canes at least one-third and set them five or six inches deep in the ground.

The blackberry plantation will live and bear for many years if careful cultivation and pruning are practiced. For this reason the rows of plants should be at least six feet apart. The first summer frequent cultivation is necessary in order to conserve the moisture and keep the young plants growing. All weeds should be destroyed. About midsummer a cover crop should be sown and plowed under the following spring, continuing the cultivation in the same manner as the year before. This necessitates considerable labor, but it will pay in the larger crops and the longer life of the plantation. The usual form of trellis for the plants consists of a single wire, two or three feet from the ground, attached to posts set fifteen or twenty feet apart and extending the length of the rows. To this wire the canes are tied.



A Successful Blackberry Patch

will put the land into shape. Planting should be done in the spring in northern sections, and perhaps, also, in southern localities as well. Sometimes fall planting will prove successful, but early spring setting is considered safer. This should be done as early as the ground can be

for poultry. It furnishes shade and protection, and the fowls can always find green food and insects among the trees. The poultry is also a great benefit to the orchard, because of their destroying the insects, most of which are harmful to the fruit.

Planting The Home Grounds

By MILDRED GREEN BURLEIGH

If March is the month of preparedness and planning, April is the month to begin action. It is no longer a question of to plant or not to plant, but rather a preparation of soil and actual planting.

Many attractive houses are absolutely without a setting. The yard runs riotously from the house to the street, to the garden, the barn, and the wheat field. There seems to be no boundary lines save perhaps a practical unattractive fence. What these houses most need is a background, which will cover up unsightly views and make an attractive outlook from the house in every direction. Many owners of barren looking property would be glad to beautify their homes if they knew just what to do. It is for these people that this article is written. Keep in mind your own dooryard and apply whatever appeals to you as being practical in your situation.

There have been and always will be differences of opinion regarding landscape gardening, but thanks to the excellent books and articles now published on this subject, we are beginning to have ideas more in common, and good taste and simplicity now walk hand in hand. It is not necessary to employ a landscape gardener or to build expensive greenhouses in order to have attractive surroundings for the home, although these things are without doubt an addition.

To begin with, vines on the verandas lend inherent beauty of themselves, soften harsh lines, attach the house to the grounds, and furnish refreshing shade. They also impart an air of permanency when grown in profusion and even a wire fence may be transformed into a thing of beauty by common Woodbine or Wild Grape. Dutchman's Pipe is especially good because it throws out its leaves near the ground and makes a heavy shade. Among the flowering vines, Honeysuckle, Clematis, Trumpet Vine and Wisteria are the most beautiful. On stone or brick walls, Ampelopsis is very effective, especially with its gorgeous coloring in the fall. Vines require no attention after they are once planted and trellised.

Keep the space in front of the house open, with the view unobstructed if it is worth preserving, otherwise get seclusion by planting a hedge or beds of shrubbery along the street line or roadway. Whether you allow your hedge to grow or keep it cut, and whether you plant low or high shrubs will depend on the size of your yard and your wish to preserve a view or secure seclusion, but by all means keep the space in front of the house for lawn.

If you are fortunate and have an apple orchard at the side of the house, plant vines on the fence and use the land next to the fence for your perennial garden. If you are not so fortunate or wish to shut the yard in, plant Evergreens, with Golden Willow, Catalpa and Poplar to form the back-

ground. In the foreground, plant Lilacs, Syringa, Spirea, Deutzia, Weigelia, Golden Elder and Althea. In front of these plant your perennials. If you buy these they will cost from 15 cents each to \$1.00 per dozen, but they can all be easily raised from seed and should be started in June, in a bed, in some out of the way place and transplanted into permanent position in September. This hardy border of perennials is one of the most beautiful and lasting assets in the yard. Annuals and bulbs may be planted in with these and add much to the charm of your old time garden.

Among the early blooming perennials are the Columbines, 18 inches high, English Daisy, 6 inches, Violets and Forget-Me-Nots, 4 inches, Iceland Poppies, 12 inches, Anchusa Dropmore, 4 feet, Oriental Poppy, 3 feet and Pyrethrum, 4 feet. Later in June and July come the Delphinium Belladonna, 4 feet, Canterbury Bells, 3 feet, Hardy Pinks, 1 foot, Achillea Pearl, 2 feet, Sweet William,

Roses have been purposely left to be treated by themselves, because they do much better in beds where only roses are planted, although the Hardy Garden Roses may be planted in the border beds.

It is always difficult to sift the many varieties down to a choice of one of each color. Study a good catalogue and make your own selection, but for a beginning, this list will serve as a guide. Clio, delicate blush or flesh, Frau Karl Druschki, pure white, Gloire Lyonnaise, pale yellow, Hugh Dickson, crimson, Paul Neyron, bright pink, Magna Charta, carmine pink.

There are many varieties of the ever blooming Hybrid Tea Roses which are suited to garden culture. If you cannot give them special soil and care, plant only the very hardy varieties such as the Chinese and Bengal Roses which give wealth of bloom from June to frost. Hermosa and Champion of the World are the best light pinks, Gruss An Teplitz, red and Souvenir de la Malmaison, flesh. If you have good soil and time to feed and spray, try a bed of Hybrid everblooming Teas of the hardier varieties, such as Kaiserin Augusta Victoria, white, Helen Good, yellow, Killarney, pink, Radiance, dark pink, Duchess of Wellington, deep yellow, and General McArthur, red.

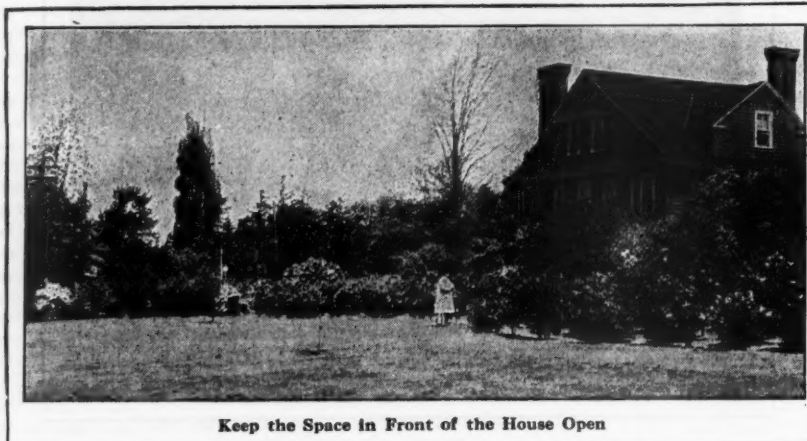
The back-yard should receive just as much care in arrangement as the front yard, although it may vary greatly in the varieties planted.

Every yard should have an arbor or summer house, its size depending on the size of the yard. Grapes make a charming and utilitarian arbor. If you must economize in space, make a small arbor close to the house, if you have room, spread the arbor out into a pergola with grapes and hardy climbing roses, or keep the roses for a separate trellised entrance into the kitchen garden. Among the hardiest of the climbing roses are the Crimson Rambler, Christine Wright, rose pink, Dorothy Perkins, pink, Gardenia, yellow, and Silver Moon, white.

Your kitchen garden should by all means contain currants, blackberries and red raspberries. These may be used as hedges or dividing lines or as a background for the border of small shrubs.

Asparagus, rhubarb and gooseberries may also be utilized as borders or dividing lines, and the fruit trees kept for the final boundary of the back-yard. A complete list of both fruits and vegetables was given in the March number of Green's Fruit Grower.

In the planting of the Home Grounds every man must be prepared to do a certain part of his own thinking. Suggestions may be given but the application of these must be made individually. Whoever beautifies his own grounds and buildings, beautifies his community. He adds value to his own property and helps to cultivate a love of beauty and order that cannot be estimated in dollars and cents.



Keep the Space in Front of the House Open

2 feet, Shasta Daisy and Hardy Phlox, 2 to 3 feet and Hollyhocks, 6 feet. In August and September the border will be aglow with the Hardy Asters, Hardy Chrysanthemums and Anemones.

No garden could be complete without some of the annuals. Among the old time favorites are Snapdragons, Asters, Bachelor Buttons, California Poppies, Calendulas, Larkspurs, Love-in-a-Mist, Mignonette, Poppies, Stocks, Marigolds and Zinnias.

The treatment of the space on either side of the house depends upon the size of your yard. Whether you plant Evergreens and larger trees depends upon the space that you have at your disposal. If you are only going to allow from six to eight feet for your border, plant only the low shrubs, perennials and annuals.

The best method of sowing the seed of both annuals and perennials is to sow broadcast and sift fine soil over the seed, thinning out and transplanting later if you so desire.

Pruning Young Fruit Trees

By J. C. WHITTEN

Train up a fruit tree in the way it should go and when it is old it will not depart from it. It is easy and cheap to shape a young fruit tree so it will always have good form; it is difficult and expensive to shape an old fruit tree that has been neglected.

The main framework of the fruit tree should be shaped in early spring. Additional pruning should follow from time to time during the summer to further correct and guide the new growth.

The center of the young tree should be pruned out, leaving from three to five main limbs to form the framework of the tree. This gives a tree with an open center, to admit sunlight, and with broad spreading limbs. A broad, low tree is easy to handle and fruits better. Much of the fruit can be picked without ladders. A low tree is easier to prune, spray and care for.

Peach trees are pruned most severely of any of our orchard fruits. In addition to thinning out surplus limbs the main limbs should be cut back one-third to one-half of each season's growth. Cut to outward-growing side limbs, so as to favor an open spreading top.

Japanese plums and nectarines should be pruned like the peach, and apricots and European plums essentially the same but less severely.

Apples, pears and American plums should be given essentially the same shape of framework but cut back with a medium degree of severity.

Sour cherries are pruned least of all our fruit trees. They



should have the open center and spreading main limbs. The main limbs should not generally be cut back as their terminal buds make the strongest growth. If a limb is in the way, it should be removed entirely instead of being cut back.

From time to time during the summer, go over young trees to guide their growth. If too many limbs are starting from a given point, they may be thinned to the required number. If a rank limb tends to fill the center or cross other limbs, it may be removed. If the strongest limbs all grow in the same direction, thus giving a one-sided tree, they may be pinched back, thus encouraging other limbs to start on the opposite side to balance the framework of the tree. In the case of upright growing varieties, particularly, the main limbs often tend to grow straight upward instead of spreading. In such cases the tips of these upright limbs may be pinched back. This will induce side limbs to grow outward, thus securing a spreading form.

"Things are changing out on the farm," says "Associated Advertising." "In the old days when the farmer's production did not bring the high prices it does today, and the farmer was nearly always in our debt, we storekeepers could sell him almost anything we wanted to, but the farmer now is a capitalist, his annual business amounting to more than ten billions. We no longer have to carry him from year to year. When he comes into the store to buy, it is a cash deal and we have to sell him what he wants and not what we want to give him."

What to Plant for Profit

(Continued from Page 1)

nesting places for mice which girdle the young trees. There is, however, no objection to the planting of strawberries in young orchards.

Many growers of everbearing strawberries get quick returns and large profits and there is no reason why these berries can not be successfully grown between the newly planted trees.

The Small Fruits

Mr. E. H. Burson, Sup't of Green's Fruit Farm writes as follows on small fruits:

The possibilities of the crop and the returns from the small fruit field depends largely upon the location, the attention given to the plants and the season. Usually the garden patch yields a much larger crop, acreage considered, than the large field.

Strawberries. Probably this fruit has brought more money to the fruit grower than any other of the small fruits. There seems to be no limit as to the yield under special favorable conditions. 5000 qts. per acre is not considered a phenomenal yield. One correspondent wrote that he sold \$572.00 worth of Senator from less than an acre and I expect that some of the readers of Green's Fruit Grower can make a considerable better showing than this. On the fruit farm we have been generally well pleased with the crop but have kept no record of yields per acre.

Raspberries. The purple Columbian we find the biggest yielder. We have one patch of 6 rows, 400 ft. length, which has yielded 50 bushels each season the past three seasons. One of the largest raspberry growers in New York State said recently that 2000 quarts should be harvested from any good average acre field. The reds and blacks are ever in demand both for eating fresh, canned and dried. The reds bring higher prices in the markets and it is claimed by some growers that there is more money in the reds than the blacks, but this depends largely upon the market perhaps. Here we have no difficulty in disposing of all we can produce, both black and red and find that the black pays best, but then our soil is not just the right kind for the red.

Blackberries. The yield of a good healthy blackberry bush is a surprise. Several years ago we set out 10 rows of Minnewaski 330 ft. in length and later when the rows were in good bearing size in one season picked 100 bushels of fruit that sold at \$3.20 per bushel.

Currants. Possibly next to strawberries, currants taking one year with another, have paid us better than any other of the small fruits. For several seasons we fruited a patch of the Red Cross variety containing about one-half acre with 1200 bushes and the gross receipts for two seasons were respectively, \$537.00 and \$482.00.

In planting for profit, first consider your soil, climate and market conditions. Then apply the experience of other growers to meet your local conditions.

Beautifying Old Trees

In this country there are many old trees around the farm home and along the roadside that are more unsightly than otherwise, but we don't want to destroy them. How such trees may be beautified by the use of vines clothing their trunks and branches is illustrated in most all our forests and thickets. There, many of the wild vines of the locality find their way to the trunks and thankful for the support received they repay it by adorning it from the ground to the topmost branches.

In many cases when autumn arrives such trees are of conspicuous beauty, the vines changing color to a crimson yellow as in the case of the Virginia Creeper. Nature's example in this respect is often imitated by those who know how such vines beautify trees and plant such vines as will suit the purpose around the trees on their grounds. And there is no need to wait until a tree is old before it is done as no harm comes to living trees by vines covering them when such vines are not permitted to over-lap the foliage of the tree.

When trees are dead or dying, vines

may be used to cover them completely to great advantage. Very old trees having lost their small branches and showing but bare large ones are well adapted to having the Virginia Creeper set to them. This vine soon reaches the extremity of the branches and then along the course of their growths the side shoots droop often many feet in length and those who know of the beauty of the foliage of this vine in the fall can imagine how beautiful the display such an old tree makes.

There are several of what are called self-climbing vines. The Virginia Creeper, Trumpet Vine, the evergreen climbing Euonymus radicans, the English Ivy and grape vines are all such as take care of themselves well where trees are concerned as they attach themselves to the rough bark. In fact, all these excepting the grape vines will take hold of the smooth bark, but the grape needs something its tendrils can entwine. But with some help to get up the trunk until the branches are reached there are several



Sorting Apples at Mr. Babcock's

other vines that will then take care of themselves. All of those named below will do it.

Ahebia, Actinidia, Aristolochia (Dutchman's Pipe), Celastrus, Clematis, Jasmine, Lycium, Lonicera, Wistaria and Gelsemium. All of these have means of gaining their way. Some, such as the Clematis, do their climbing by the twisting of their leaf stalks, while the Wistaria takes a twist of its new shoots around a branch to help its hold. The Wistaria is often seen at the very top of trees forty or more feet in height. Even our climbing roses if helped to get as far as the branches of a tree will soon show their appreciation of it by spreading among its branches and rewarding us with their display of beautiful flowers.—J. S. Underwood.



Photographing Mr. Lasher's Montmorency Cherry Orchard

Desirable Varieties of Grapes

By J. S. UNDERWOOD, III.

The grape has always been one of our favorite fruits and on our farm we have growing about the premises eighteen different varieties. We have grapes ripening in July when the first blue Isereellas begin to turn, until the holiday season when the Catawba and Delaware red are gone. There is no fruit more healthful and we have in our variation of black, blue, white and red grapes types which are eaten from the vine during the entire season. I consider the Concord the best of them all and the most wholesome. We never tire of the grape.

We like a variety of grapes for the reason that the housewife may make up such a vast variety of jellies, preserves, pickled, dried, candied, spiced and canned for the table. Grapes soon come into fruit after planting and nothing but severe frost will cause a vine to fail in fruiting when once well established and properly cared for each season.

One advantage with grapes is the fact that they may be planted and bear profitably about the farm home in almost any old nook or corner. A dozen vines occupy the division line forming a screen between our house lawn and garden and are trained upon cedar posts five feet high, painted red and bearing galvanized wires which support the vines. A screen of beauty, usefulness and value. Along the rear lawn fence other varieties are trained out of the way yet utilizing soil that would not handily produce other fruits or vegetables and serves to make a beautiful effect for the rear of the garden and lawn.

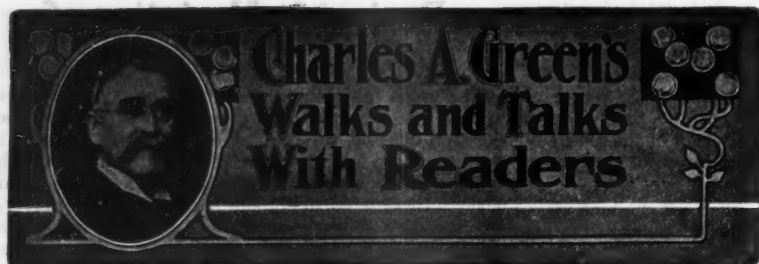
The beauty of the grape is the fact that it is so adaptable to vacant places. Just as many of these vacant places should be planted to as many different varieties as possible. Vines are very cheap in price considering their great value and there is no reason in the world why everyone owning an area of ground, however small, cannot at least have all the grapes they want for use in the home. In purchasing vines I would obtain those that are two years old with long sinewy rootlets.

A good and simple method of planting is as follows: Dig out a good sized hole with good depth. Two piles of earth are made, one of the top soil and the other the sub-soil which is usually clay. The top soil is placed back in the hole in a mound shape then a bucket of creek washed sand is spread about the base of the mound, holding moisture to the ends of the rootlets. The ends of the rootlets are pruned off smoothly where broken and spread in single strands about over the mound. Soft earth is filled over and around the plant and the sub-soil mounded about the top. Always mulch at once about the plants with fine compost which should later be cultivated into the soil during the season. Fertilize every year with some rich compost. Short stakes should mark the growth of the first year, longer stakes the second season when some fruit may be obtained and the third season they should be trained upon permanent supports for future bearing.

For varieties I place Concord, Moores' Early, Worden, black, Niagara, Martha, Pocklington, white, and Delaware, Salem and Lucille or Lindlay, red, the best selection for all home uses. Vines are so cheap, however, that one may well enjoy many more varieties which are suitable to his location.

Transplant Evergreens in April

Move evergreens in April in the North. Preserve a large ball of earth and cover it with burlap. Do not expose the roots to the air a second more than necessary. While one man is planting, another should hold up a shield to keep the sun's rays off the roots. Have a big hole ready to receive the tree. Use only fine soil; firm it well. Water once thoroughly after planting, and if there is a drought in June, water thoroughly again. But don't hector young evergreens with frequent sprinklings. They use only ten to twenty per cent as much water as deciduous trees of the same weight. That's because they contain resin, the function of which is to diminish evaporation.



When and Where to Plant

The progressive man is ever apt to be found planting something. This is not surprising for the result of a little planting is marvelous. Here is a man who has in his backyard a slop hole, a hollow space where various wastes from the house and kitchen particularly have been thrown year after year. This blighted spot is cleared up occasionally, but in the main it is an eyesore. Not only this, but it is not hygienic. This man being progressive spades up this little declivity and plants therein a bed of roses or of something else equally brilliant and that is the perennial phlox, which is as easily transplanted as a tuft of quack grass and as enduring. Now observe the marvelous change in this backyard. Here is created beauty from ugliness.

Having created beauty in this spot, who will be daring enough or depraved enough to clutter up this sacred spot with rubbish, with old boxes, barrels or waste papers. No, the good work you have done in beautifying this spot is liable to be continued by other members of your family until you have a glorified backyard. Some people who are planting a flower bed think the proper place for it is out in front near the street. I have no serious quarrel with those who plant their shrubs and flowering plants thus conspicuously, but I do hold that an excellent place for them is in the backyard, as I have indicated.

Most people have what is called the kitchen garden located near the rear of the house. This kitchen garden may be divided into plots by rows of ornamental shrubs or ornamental plants as well as by rows of fruit trees planted close together, as I have often indicated, but these plants are even more attractive when located in beds or on the borders of the lawn.

An epidemic of ornamental shrub, vine and tree planting is spreading over this country. There was a time when people gave little thought to these beautiful things, since they considered they had other affairs of greater importance. Whereas, in former days you might travel miles without seeing rural grounds beautified with flowering plants, vines, shrubs or ornamental trees, now you will find many. The important thing is to know where to place these ornamental shrubs, trees or vines. The vines can be made to trail up and around the porches, but the soil near the buildings is always poor quality, having been taken from the bottom of the cellar, therefore, you should dig a larger hole in such poor soil and fill in around the roots of the vine with good rich garden soil. The tall growing trees can be planted on the border of the place, the lower trees inside of the taller growing ones, and inside of these the shrubs, and occasionally in front of the shrubs the flowers.

A Chamber of Commerce for Farmers

This is an age of innovations. One innovation is the chamber of commerce, which, unknown a few years ago, is now met with in almost every city and in some of the larger towns. There is also a national chamber of commerce. The name does not clearly indicate the character of the association, which might properly be called Helping Hands for Home Enterprises.

These organizations are composed of the leading and most public spirited men of the community. Such associations are expected to interest themselves in everything that will add to or help local affairs. In many instances they branch out into affairs a long way from home. The question is, why should there not be a farmer's chamber of commerce, known perhaps by a little change in name, for instance, farmers' alliance? There is certainly a need of something of this kind to give agriculture in this country a big boost. It has been said that everything in this country is organized except farmers and organ grinders. No one can doubt that agriculture would be greatly

aided by an institution such as I have indicated. I see slight indications of a move in the direction of a farmers' chamber of commerce. I urge readers of Green's Fruit Grower to encourage this movement to the utmost.

Planting Evergreens

The beauty of evergreens is indisputable. Even in summer time the evergreens are as attractive as any tree, but it is in winter time particularly that the evergreen tree is fully appreciated. You will notice the beauty of evergreens in approaching the wild swamp lands where the deciduous trees, the maples, beeches, elms and birches look as though dead, whereas the evergreens scattered here and there revel in their beauty and give the woodland the appearance of life and vitality. If you had never heard of a tree that holds its foliage bright and green throughout the winter months and should come upon a forest of them in mid-winter, your surprise would be great.

The evergreen most commonly planted and one of the most hardy and easy to transplant and to train in any shape, size or height desired, is the Norway spruce, which is never so beautiful as when laden down with wreaths of snow during the winter months. Evergreens are easily transplanted. There is one thing particularly that must be observed in the planting and handling of evergreens and that is, that being in full leaf when dug and being planted, they should not be exposed to the sun and wind. In planting an evergreen you are planting a tree in full leaf and should take this fact into consideration.

My Experience with Asparagus

Of all the garden products, and there are many, I feel inclined to place asparagus at the head. Asparagus is a marvelous plant. It is scarcely possible to exaggerate its value. It has no competitor. If you think it has, please mention something that comes into forceful competition with asparagus. Asparagus is ready to cut for the table almost as soon as the average ruralist gets his garden made, or at least very soon after. This earliness of the appearance of the asparagus crop is one of the great things in its favor. It comes in ready for the table on or before the strawberries are in blossom and when the early peas are just breaking through the soil.

Another remarkable thing about asparagus is that once planted, it will continue to produce in the same plants for many years, or I might almost say for a lifetime. I have vivid recollections of a small asparagus bed standing on the homestead farm where I was born. In those early days it was thought necessary to dig a big pit in preparing for planting asparagus and to fill in the bottom of this pit with stones and then with old bones, rubbish and manure, and finally to put two feet of good soil on top. Of late years we have learned that this is all unnecessary and that all you need is good garden soil in order to succeed with asparagus, which will grow and produce on any soil that will grow good corn and potatoes, the richer the better.

This old asparagus bed that I knew in the days of my childhood was never cultivated. Grass was growing thickly over the bed and yet strong shoots were sent up continuously through the early spring and summer days. I often cut shoots from this asparagus bed as large as my thumb and from 6 to 12 inches in height. Later on this asparagus bed was a thing of beauty with its tall stalks, feathery foliage and abundance of red berries.

Planters of asparagus sometimes fail in making the plants live for the reason that they cover the crowns of the plants too deeply with earth, therefore I advise you to take particular pains not to cover the crowns of the roots at planting over an inch in depth, the roots to be straightened out so that the lower roots are well protected in deep and moist soil. In planting asparagus

I dig or plow a trench about 8 inches deep. Then I lay these asparagus roots in the slanting side of the trench with the crowns 3 or 4 inches below the level of the soil. Then, I fill in the soil and tread it down firmly, aiming to cover all of the roots and to cover the crown not over an inch in depth. This will leave the trench not fully filled in over the crowns. After the asparagus has sent up a growth of shoots then the soil can be drawn in around the crown without injury, but if the crowns are covered too deeply at planting they are apt to rot and never to send forth shoots. The earlier the asparagus roots are planted in the spring the better, but they may be planted as late as June first.

Summer

Summer never looks so inviting as in mid-winter when the days are dark and drear and snowbanks have piled up over the beds of the roses. There are many things that are most inviting when you are at considerable distance from them. When summer comes we are charmed with her attractions, but ere many weeks have passed we begin to complain of the heat and sometimes of the dust. At such times as these we look longingly at winter and say, "If we could only be cool we could abide the lack of flowers and foliage."

There are few who would like perpetual summer. The changes which occur in the temperature and the weather of the middle north would seem to be enough to satisfy the most capricious or critical. We have the hottest weather, then the coldest weather, then intermediate, all the modifications leading on from early spring to late autumn. I have said to my good wife, "Whenever, our health demands it we will hie away to California to dwell under perpetual sunshine." But when I think of the possibility of this change I consider that it is possible that I shall look back to the good old winter time that we used to have in New York State.

Pruning Currant and Gooseberry Bushes and Other Small Fruits

If left unpruned for many years currant bushes become filled with a mass of bearing canes and the fruit becomes smaller and smaller, making picking more difficult and expensive. The young canes of each season's growth should be cut off about one-third of their length and not over three or four new canes should be allowed to form on the bush each season, other new canes being cut out entirely. Then a portion of the bearing bush, two year shoots or older should be cut out each year. You will notice that newly planted currant bushes yield large fruit abundantly. This is owing to the fact that the bush is not excessively filled with bearing canes, therefore, in pruning the currant see that there is not an excessive amount of bearing wood or of the new wood left on. Gooseberries need similar treatment, but the gooseberry bush is not so likely to become overburdened with bearing wood or with young wood as is the currant.

I recall vividly the row of currant bushes in my father's garden when I was a child on the homestead farm. There were hundreds of bearing branches on every bush, whereas there should not have been allowed to remain more than a half dozen vigorous fruit bearing shoots. Since there was such a mass of bearing wood the new shoots that were sent forth were feeble.

In pruning red and black raspberries cut out the canes that bore fruit last season, which naturally perish and are of no further account. Then cut back the ends of branches far enough to make the bushes self-supporting. Next June or July nip off the ends of the young canes, which have just been forced up, when they have reached a length of two to three feet.

Blackberry bushes require different treatment, for if you cut off the ends of the branches of the new wood of the blackberry you cut off the part that furnishes the greatest amount of fruit, therefore, if you did not head back the new and thrifty blackberry canes last June or July, you will destroy much fruit by cutting off the ends of the canes which are to bear fruit this season.

Remove the brush, cut off from small fruit bushes and burn it promptly.

Hustling

There are few places that require more hustling than the farm. All winter we have been getting ready. Finally, spring is here. The snow disappeared, the ground has thawed, the buds are ripening, the grass has

started and all nature tells us the time has come to hustle. It is so much easier and so much better economy to hustle and keep ahead of our work than to let things drag and get the upper-hand of us, we make a strong bid for efficiency.

If the repairing of harness and farm tools generally has been done during the winter, the buildings and fences put in good repair, the woodshed provided with kindling for the year, and the stable manure drawn into the fields almost daily as produced, there is nothing to hinder our attacking the vital affairs that pop up daily, or almost hourly, in the busy spring season. But here is one word of caution: There is nothing gained in starting to plow or cultivate the soil when it is wet and sticky. Wait until the soil is dry enough to crumble beneath the plow, the hoe or the spade.

The Grape

I am going to give two reasons why you should plant the grape and continue to plant it. In the first place grapes are good to eat. In the second place the vines are exceedingly decorative when trained up the sides of the house or the porches or against outbuildings, where they can be made to hide disagreeable views. Great interest has been attracted to grape growing by the making of unfermented grape juice, which is now a commercial product offered in almost every delicatessen, the department store or grocery over this broad land. To drink a glass of this grape juice is almost like eating a cluster of fresh grapes. This attractive product has answered the question how can we preserve grapes over winter? We have found it difficult to preserve them in their natural state but we have found it not difficult to preserve the juice not only over one winter but over many winters.

I am often asked: What variety of grapes shall I plant? Those living at the north should look for early ripening varieties. The Concord is hardly early enough for sections north of New York State. The Delaware should ever be a favorite variety owing to the fact that it ripens so early. I have never known a season when the Delaware did not ripen. Brighton is an early red grape not quite so early as Delaware. Worden is much earlier than Concord and never fails to ripen at Green's Fruit Farm. Diamond is an early white grape. Niagara grape is not excelled as a vigorous grower and a great producer of monstrous clusters of beautiful fruit, but I would like it better if it were a little earlier, and yet at Rochester, New York, it seldom fails to ripen. Whatever you do plant a few grape vines the coming spring.

The Wheelbarrow

I do not see how the fruit grower or farmer can run his business without a wheelbarrow. Whoever invented this simple device is deserving great credit. There are many forms of the wheelbarrow, some with large wheels and some with small, but all are desirable. As indicating how useful the wheelbarrow is notice how soon it wears out. The life of the average wheelbarrow on the average farm is not over three or four years. In buying a wheelbarrow it is economy to buy a good one. The cost will be from \$1.00 up. The more you pay the cheaper the machine. When you come to study the wheelbarrow you will notice it is an ingenious device. It readily propels itself on level ground or on a downward slant. All you have to do is to hold up the handles and it goes ahead of its own accord. It is one of the few farm machines that can be moved backward and forward with equal facility.

It seems hardly necessary to mention the varied uses on the farm of the wheelbarrow. With it you can convey supplies from one end of the farm to the other at one trip, whereas, without it and with simply your arms and legs you could convey only one-tenth as much. Unlike the wagon the wheelbarrow can be dumped. When not in active use it is a plaything with the children.

The Farmhouse Cellar

The cellar, whether on the farm or in the city, is out of sight and liable to be neglected. It is as necessary to keep the cellar clean as to clean any other part of the dwelling. We are constantly breathing air from the cellar which is rising into the rooms above every moment. How necessary then that this air should not be contaminated by decaying fruits and vegetables. The capable housewife cleans up her kitchen almost daily, but the cellar cleaning is not supposed to be the

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work of the housewife, therefore, in some instances the cellar is only cleaned out once a year. The result is accumulations of waste material that should be carted away and the setting to rights of various things that are dumped promiscuously in the house cellar.

It is surprising how bottles will accumulate. I do not doubt that the average farm cellar contains a barrel of empty bottles, and yet the owner may not be a drinker of alcoholic liquors. There may also be found in most cellars a barrel or more of disabled fruit cans. Though sweeping out the cellar and carting away the rubbish and assorting the various objects and arranging systematically may result in a great improvement, this is not enough. The cellar walls should be whitewashed at least once a year. This whitewashing will destroy myriads of germs of disease and with them patches of mold. The cellar should be aired occasionally during mild days of winter and every day during summer by leaving the windows up. All cellar windows should be hinged from the top for this purpose.

Seeds as Food

Some good will doubtless come from the present deplorable war in Europe. Many valuable inventions will be one result. Many economies in living will also be brought about by the lack of food supplies.

It has been discovered that the seeds of fruits may furnish food most largely through the oil which the seeds contain. Cherry and plum seeds have been found to be rich in nourishing oils that will take the place of fats in cooking. These seeds, or the oil therefrom, should be used at first with caution for some of them may be found to contain deleterious constituents. For instance, I have been told that the seed of the peach contains prussic acid, and that children eating them in quantities sometimes have convulsions. It is claimed, that the horse chestnut, which bears large quantities of nuts, can be made palatable and wholesome through improved methods of cooking, the product to be used for man or beast. The seeds of the apricot I have found good eating, the flavor of the kernel being similar to that of the almond. Many people are exceedingly fond of apple seeds. Such people miss no opportunity to eat with relish every seed in the apples they partake of.

The quantity of fruit seeds produced in a country like this, where fruit grows almost spontaneously, is vast, thus the waste of this product should not be permitted. It is not long ago that the seed of the cotton plant was thrown away as useless, whereas now the product of cotton seed, which is cotton seed oil, is of great commercial value. Consider for a moment the value of flaxseed as a producer of oil for painting and for other purposes. How great are the provisions of nature and how mysterious, whereby a simple plant can absorb from the soil and air oils, flavors and nourishing compounds.

Land Clearing Needs Set to "Agri-Meter"

"When our fathers went a-stumping they used axes with much thumping, and the total of their comfort was a chaw tucked in their cheeks; and they strained their old suspenders lifting logs that were bell-henders,—and clearing up an acre was the horrid toil of weeks.

"Scarce a village banker aided those poor land reclaimers, fabled, or figured on some credit scheme to put them on their feet; for when they asked for money they were looked upon as funny, and curtly told to tie their ox on someone else's street.

"Land was cheap and men were cheaper, and the old Virginia creeper, the dogwood and the hickory grew more plentifully than crops. Oh, that early pioneering needed rough and rugged gearing, and had we to live thus nowadays we might drown our aches with hopes.

"Now behold how times are changing, and one sees the banker ranging to find deserving settlers and to speed the tractor plow; and explosives and machinery are all busy shifting scenery to usher in the pure bred seeds, the pastures and the cow.

"Now the locomotive whistle comes no longer like a missile to make the stump-land settler duck his head with glances down; for the rail chiefs are combining, not some crafty work designing, but to route the Farmland Special—right of way past every tower."—Wisconsin's "Poet Lactate" in the U. of W. Press Bulletin.

Cutting Out Borers Saves Peach Trees

Peach tree borers, the most destructive insects in peach orchards of eastern United States, are best controlled by worming, or cutting the grubs out of their burrows with a sharp knife in late fall and early spring. Entomologists at the Ohio Experiment Station say, that nearly all sprays and washes, as well as all mechanical protectors and barriers, are of doubtful value, some not paying for the cost of their application and others being positively injurious.

During the winter the insect lives as a larva in a deep burrow under the bark of the peach tree a few inches below the soil level. With the warm days of early spring it feeds upon the tender growing tissues beneath the

bark, causing the tree to become sickly and unproductive and often to die if a sufficient number of borers infest it. By early summer they construct cocoons, and in about nineteen days emerge as adult moths. These parents are clear winged and resemble certain blue wasps. Although the female lives only four or five days, she lays about 400 fertile eggs in this time, and from these the larvae hatch in eight to ten days, or about July 1st to August 30th.

To kill the borers, remove the soil, when not frozen, from about the base of the trees. Exuding gum and "sawdust" will show the location of the larvae, and thus they can be cut out with a sharp knife or probed with a wire. The earth should then be replaced around the tree and left until the middle of

September, so that eggs will not be laid again in the formerly infested portion.

Two Moods

Written for Green's Fruit Grower by Alonzo Rice

A fine musician is the wind. A small, Unnoticed crevice in my window-pane Admits the little lisper. There through all The summer day he sings a sweet refrain.

A grand musician is the wind. He lays His mighty hand upon the ocean waves; And distant worlds of tumult, in amaze, Pause in attention to the thunderous staves!

Friction

Is the Problem Solved in Hudson Super-Six

This is to give you a clear understanding of what the Super-Six motor means.

This is why it holds unquestioned the leading place in Motordom. Why it won all the worth-while records. Why it stopped the trend toward Eights and Twelves. And why it gave supremacy—perhaps forever—to this new type of a Six.

What Friction Does

Motion causes friction. You know this in farm machinery. It is friction that finally destroys it.

In a high-speed motor the vibration makes friction a big problem. A large part of the power is consumed by it. The motor's endurance is limited.

So the chief problem in motor car engineering has been the reduction of friction.

Sixes Disappointed

The Six-type was adopted to lessen this vibration. The Light Six, with small bore, was made to lessen it further. But the highest attainment in a Light Six proved a disappointment. Motor friction was not reduced as engineers had hoped.

So some leading makers, including the Hudson, started tests with Eights and Twelves. It was hoped that twin motors, set at angles, would solve the friction problem.

Then Came This

That was in 1915. Many engineers thought the Six type was doomed. That the V-types would displace it, as they had in certain cars.

But in that year Hudson engineers invented the Super-Six. In December, 1915, we were granted patents on it.

Tests proved that this invention added 80 per cent to the efficiency of the Six. And it did that solely by reducing friction beyond any other type.

All Records Won

Last year, in a hundred tests, the Super-Six won all the stock-car records which can prove a motor's value. It won the records for speed, for hill-climbing, for quick acceleration and endurance.

It broke the 24-hour endurance record by 32 per cent. It twice broke the transcontinental record in one continuous 7000-mile round trip.

So, in performance and endurance, the Super-Six has no rival. And that is due to the fact that friction is reduced almost to nil.

The Economy Car

This endurance will probably double the life of the Hudson car. The reduction of friction saves immense power waste.

In addition, we this year add to the Hudson a wonderful gasoline saver.

So the Hudson Super-Six means economy to you. It means a daily saving—in the long run, a very big saving.

It means pride in your car. The Super-Six owner knows that he rules the road. And, in beauty and luxury, the car stands out as a master-piece in any crowd.

You can have all this, and still save money, because of the Super-Six economies. These are things to consider well when you buy a car to keep.

If you don't know the nearest Hudson dealer, ask us for his name. Let him show you all the ways in which this master car excels.



Phaeton, 7-passenger, \$1650
Cabriolet, 3-passenger, 1950
Touring Sedan . . . 2175

Limousine 2925
(All prices f.o.b. Detroit)

Town Car . . . \$2925
Town Car Landaulet . 3025
Limousine Landaulet . 3025

HUDSON MOTOR CAR COMPANY, DETROIT, MICHIGAN

Good Management in the Garden

By CHARLES H. CHESLEY

The home garden on the farm ought to be the most delightful bit of land on the place. If it is rightly managed it is certainly the most profitable. This does not necessarily mean that it brings in the most dollars, but applying that old-fashioned philosophy that "a penny saved is a penny earned" the fact becomes self evident. Here, again, the whole truth is not stated for the products of the garden are worth more than what they would actually cost in dollars and cents, because they are so much better than the purchased products. Who can figure in money values the pleasures of having vegetables and fruits, home grown, for every day in the year? This is the idea; something for every day in the year, and the farm garden should be so planned that something will be available for the table the year around.

Some years ago we "discovered" the possibilities of the farm garden. Before that time we had a garden every year but now we make the garden a real part of our living. Perhaps this means considerable work but it is work that brings as much pleasure as anything in country life. Properly planned, however, the garden need not be a burden. Our garden is something like a half acre in extent. Every year, along in the fall, it receives a liberal coating of barnyard manure. It is then plowed and the portions devoted to small fruits and perennial vegetables are mulched. By rotations we have been able to keep maggots and other pests from becoming a serious menace. The ground is in the very best possible state for intensive cultivation and from May until late fall not one foot of the ground is idle. One crop follows

another. Where an early crop is grown something else is put in to round out the season. Thus, spaces are made among the spinach plants for tomato plants to be set at the proper time. The first crop is removed in a few weeks and the tomatoes have all the land when they need it. This is a sample of what is done with the entire plot of ground. There are no idle spaces to grow weeds and breed insects. The garden is kept busy all summer.

What do we grow? The perennial corner contains rhubarb and asparagus, also a few assorted herbs. Each year we plant string and shell beans, both running and bush, sweet corn of one variety only but successive plantings. This variety is Golden Bantam. We plant beets, carrots, parsnips, salsify, turnips early and late, early cabbage and cauliflower, brussels sprouts, onions both from sets and seed, lettuce, spinach, endive, Chinese cabbage, Swiss chard, watermelons, cantelopes, cucumbers, squashes, vegetable marrows, celery, leek, peas, early and late, kohlrabi, tomatoes, peppers and other things until there is not a single vegetable advertised in the seed catalogues that has not had a try-out in our garden. We grow these things primarily to use at home, but sometimes we have a surplus and then we sell to the neighbors or take a wagon load to the city. Besides supplying the table we can a supply of almost everything for winter use. This is one of the most satisfactory things in connection with our garden. When the cold weather comes on we can go down cellar and take a look at the long rows of canned vegetables, arranged upon the shelves, and the boxes of vegetables stored in sand and face the winter season with a stout heart. We plan to raise potatoes, winter cabbages and turnips, also a supply of mangels for the hens, outside of the family garden in another plot of ground. Each fall our cellar shelves groan under the weight of several hundred quart cans of vegetables and fruits. Some seasons, a certain product may be a failure, owing to weather conditions, but we always plan to fill the cans with something that will be welcome during the winter.

All the garden except a very small portion is laid out in rows wide enough to use the horse cultivator. If land were less plentiful we might put the rows nearer together and do more hand work. It does not pay to use the hoe, however, for work that the horse can do just as well. The hand cultivator is used more or less to supplement the work of the horse machine. We have not kept any account of the actual cost of our garden in labor expended. Doubtless the figures would total up pretty high but the work is done at odd times and all the members of the family feel that they have a part in the labor. It is really a labor of love, this gardening as it is done on our place.

In planning for the farm garden, it is advisable to plant standard varieties. Get one or two good reliable seed catalogues and send for the seeds early. Make a plan on paper and begin to enjoy the garden in anticipation even before it is planted.

My Strawberry Bed

By Rich Lucas

My strawberry bed was growing old and the yield was gradually decreasing but



A Powerful Fungicide for Fruits, Vegetables and Flowers

Peach Leaf Curl, Brown Rot, Apple Scab, Grape Mildew, Potato Blight, Cucumber Wilt, Bean Blight, Rose Mildew, etc.

Most inexpensive. 1 gal. makes 200 gals. spray. \$1 to \$2 per gal. according to size package. Booklet free.

B. G. Pratt Co. Dept. P. 50 Church St., N. Y. City



IRON AGE
Farm, Garden and Orchard Tools
Answer the farmer's big questions.
How can I grow crops with less expense? How can I save in planting potatoes? How make high priced seed go farthest? The IRON AGE Potato Planter solves the labor problem and makes the best use of high priced seed. Means \$5 to \$20 extra profit per acre. Every seed piece in its place and only one. Saves 1 to 2 bushels seed per acre. Uniform depth; even spacing. We make a full line of potato machinery. Send for booklet today.

No Misses
No Doubles
Bateman Mfg Co., Box 16B, Greer, N. J.



Braender Tires

Make mileage on the road,—not on paper. They have a remarkably tough tread, and exceptionally strong side walls.

These characteristics alone, not advertising write miles on every road.

For mileage, unquestionably, **BRAENDER Tires** are "The Tyre to Tie To"

Our local agent will give full particulars,—or ask us to send them.

Braender Rubber & Tire Company
Rutherford, N. J.



Trade Mark

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The Oldest Fruit Journal in America

GREEN'S FRUIT GROWER CO., Publishers

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Subscribers who change their residence will please notify this office, giving old and new addresses.

Entered at Rochester (N. Y.) Post Office as second class mail matter.

always being busy in the fall which I have found to be the best time to set a bed, I failed to plow it up every year until its yield was quite low. I had kept the bed clean and fertilized it each fall with a commercial fertilizer and not manure as manure adds too many weed and grass seeds thus causing a great deal of extra work.

Last spring was cold and wet and the plants did not start readily and as I had read a great deal about the value of nitrate of soda for furnishing quickly available nitrogen and pushing a plant's growth, I tried it on half of my patch, applying it broadcast at the rate of one hundred and fifty pounds to the acre and I was surprised at the growth it produced. In about three weeks the plants were growing nicely and were then soon in bloom. I had berries to eat from the portion receiving the nitrate of soda a long time before I picked any from the other portion. The berries were larger, firmer and altho I did not keep a yield of the two patches, I estimated the part receiving the spring's application yielded three times as many as the untreated. Thus it not only increased the yield but increased the quality of the berries and their size and produced them earlier, so instead of plowing my patch up and replanting last fall I applied some nitrate to the entire patch so the plants would go thru the winter nicely and I am going to put on another application early this spring, just as soon as I see the plants coming thru the soil.

For commercial berry growers nitrate of soda should be a boom as the best market prices are for the early berries and I find on my patch that nitrate produces them without adding any weed or grass seeds as manure does.

DRAIN YOUR LAND

Fruit Trees Do Not Like Wet Feet

A famous Englishman, one of the biggest and clearest thinkers of our times has recently published a book that is being read all over America. It describes conditions in the old world before the war and during the war and it prophesies what will happen after the war.

In his book this great Englishman says many significant things but the most significant of all the things he says concerns farming, not only in Europe but all over the world.

"And now," he says, "The only ones among us whose living is not seriously affected by this terrible war are the farmers and those who have their money invested in the land."

What an important admission. What a big thing that thought means to America if Americans can only get hold of it and understand it.

You see in America we have just passed through the age of cheap land and low prices for farm products. The day of high priced land and of high prices for farm products has come. American farmers have got to awake, they have got to work the land more intensely and intelligently.

Take the matter of drainage alone. Do

you realize that millions of dollars are lost annually through the lack of proper drainage. It has got to be stopped. It has come to the time when it is the patriotic duty of every American farmer to clear every available acre of waste land, do away with overflows, terrace the hillsides and begin to get real crops with which to feed the world.

A good ditching machine will do all the ditching on your farm at an amazingly low cost. It will terrace the hillsides and clear out the old ditches.

Get a catalog of such a machine. Write to the stump puller people who advertise in farm papers. Select your seed with extra care. Get down to hard pan.

Take advantage of the opportunity confronting you—the American farmer—this year and you can make more money than your fathers made in five years.

And, incidentally, you can do America and the world more good than three times your number of fighting men.

Plant an Orchard

By Lucy L. Ferguson

Every farmer who lives in the apple growing district should plant out apple trees sufficient to keep his family in fruit the year around.

Few are excusable for neglecting to provide this valuable addition to the daily diet.

Apples will grow on almost any soil. Land that is rich and mellow is best, but by the use of fertilizers poorer lands can be made to grow excellent fruit.

If one can have the time, the ground should be fall plowed as deeply as one can well plow. Then as soon as the land can be worked in the spring, put out the young trees.

It is a good plan to grow vegetables or clover between the young trees the first few years. This keeps down the weeds and also keeps the ground loose.

Plant such varieties as are best suited to your locality. Start with those that ripen earliest and select those that will ripen in succession. In this way you will be provided with fruit every month of the year.

A good orchard is one help to keep the girls and boys on the farm. If there are always plenty of good apples to help entertain the young folks on winter evenings the time passes pleasantly and quickly.

"Eat an apple a day and keep the doctor away." So select your trees and send your order in early.

If you cannot put out many trees at one time, plant a few at least and care for them well, then add to your number each year till your orchard is large enough to fill every need of your family.

In this new part of Upper Wisconsin where I live, very few of the people planted orchards when they first came here, but those who did have been rewarded for last fall those trees were loaded to the breaking point with beautiful fruit.

"A word fitly spoken is like apples of gold in pictures of silver."

Orchard Planting Principles

The season for planting orchards depends upon the severity of the climate and the hardness of the species of trees. In northern sections a majority of growers recommend spring planting; in the southern states fall planting is much more general. In Missouri fall planting is to be preferred for all perfectly hardy trees not subject to winter killing, such as apples, pears, American plums and sour cherries. Tender trees subject to winter injury, such as the peach and Japanese plum, are perhaps safer planted in spring, although in the extreme southern part of Missouri some growers prefer fall planting for these species. Late fall planting from the middle of November to the early part of December is preferable to early fall planting. Fall planting is preferred to spring planting for the reason that the roots of the trees become firmly established in the soil and new roots form abundantly before the trees come into leaf in spring. The established root system is able to supply abundant water to the trees when the leaves come out and call for a large water supply on warm spring days. Spring planted trees put out their leaves before the roots begin to form; they evaporate so much water from these leaves upon the approach of the first hot days, growth stands still until new root growth has time to catch up. If the season is dry, a good many of these spring planted trees are likely to die on account of their moisture being dried out before adequate root system is formed.

On fall planted trees root growth usually begins in January below the frost line. It continues below frost during all parts of the winter when the ground is not frozen too deep. In very early spring this new root growth becomes accelerated before the trees start into leaf. This root growth is no doubt favorably influenced by the store of summer heat in the soil. There is apparently an accumulation of this heat coming up from deep down in the soil which gathers in early winter just below the frost line, giving the roots sufficient mild warmth to begin their growth while the tops above are held dormant by the cold winter atmosphere. On the other hand, in the case of spring planted trees, summer heat has been exhausted from the soil, the roots below ground are much colder than the opening buds above ground so that leaf growth takes place ahead of spring root growth.

The distance apart to plant depends upon the size which the tree reaches at maturity. Under usual conditions apple trees should be planted from 35 to 45 feet apart each way; pear and sour cherries 20 feet apart each way; peaches and plums 16 to 20 feet each way.

Preparation of the soil for planting should be as thorough as the preparation of a seed bed for corn or wheat. The land should be plowed to a good depth and thoroughly harrowed. Trees grow better in a well prepared soil.

The depth to plant depends upon the character of the soil and the season of planting. Ordinarily, trees should be set just about as deep as they stood in the nursery.

When the tree starts in the nursery it adjusts its roots to the proper depth required by that species. If the trees are planted in a heavier soil, they may be set perhaps one inch nearer the surface than they stood in the nursery; if they are planted into a much lighter, looser, drier soil, they may be set an inch or even two inches deeper than they stood in the nursery. Trees planted in the fall should be set an inch or more deeper than if transplanted in the spring. The soil is drier and better aired during autumn and there is more warmth below to stimulate root action while in spring planting the soil is cold at the bottom of the tree hole and the roots will start quicker if they are nearer the warming surface of the soil. As a rule the

beginner plants trees too deep rather than too shallow.

The roots should be trimmed so as to remove any broken or diseased parts. Cut back any ragged or dry wounds to fresh green tissue; shorten any very long roots to 6 or 8 inches so they will not be bent in setting.

Firming the soil about the roots in planting is exceedingly important. Shake the soil from the shovel so it will sift down among the roots. Meantime, shake the tree to adjust its roots in the soil. Tramp each layer of soil as it is sifted in continuously from the bottom of the hole up. There is no danger of tramping the soil too firmly about the roots, while if any loose air spaces are left, the roots will dry out and the tree will suffer. One of the most important factors is to get the roots in firm contact with thoroughly settled soil so they can get a normal water supply.

Shaping the top of the tree at the time of setting is important. The eventual aim

Pruning Newly Planted Trees

Experiments have recently been made in pruning trees recently planted with a view of learning whether it is best to prune the tree the moment it is planted or whether it is best to wait until the end of a year before pruning. The result of this experiment was that in most instances the trees pruned at planting, that is those having their branches cut back more than half their length, made the best growth the first season after transplanting.

As might be supposed, more blossom buds were found on the trees not cut back at planting than on those cut back, but no one should desire blossom buds or fruit on trees one or two years planted. The trees cut back at planting made a better growth in trunk and branch than those cut back a year later.

But here is the vital point, which does not seem to have been hit upon by the experimenters: Which method of pruning resulted in the smallest transplanting loss? I would suspect that far less trees were lost in transplanting where the branches were

CHOOSE YOUR VOCATION

Then Learn to Sell your Abilities

Everybody who has made a niche for themselves in the world, no matter how small a one it is, always is pursued by other people, less successful, to know how they made it. The really successful person is the one who usually is obliged to rely entirely on self, who is competent, willing and eager to work. The woman who wants to succeed in business, particularly if she has not been trained to it, always has a period of "feeling around," before she arrives at what she can do best. After determining what she can do, and perfecting herself in it, then comes the most important point of all, the marketing of her services.

To have the qualifications that make a good saleswoman—or a good secretary—or a good buyer—or any other job, is only half the necessary business equipment for a woman. How to sell her abilities well is equally important. In fact, the ability to sell one's own services is half the equipment for success anywhere. It is conspicuously true even in the artistic world.

Modest merit would die of its own modesty, in these days of commercial hustling. One of the Concord sages said that the maker of a good mouse-trap would soon have a path worn to his door. Maybe, if he advertised his wares, but otherwise we fear not. Some enterprising body would patent another mouse-trap, just escape infringement, put it on the market while the real inventor waited, and the path grew over with grass!

The Saving Habit

In the "American Magazine" a writer gives some interesting figures as to the saving habit of the different nations, in which we certainly make a poor showing.

France has been called the banker of the world; but French capital does not come from large natural resources but from the combined small savings of her people, who have been taught thrift from childhood up. This is true of most European peoples.

Here are a few figures:

United States has 108 savers in 1,000.

Italy has 228 savers in 1,000.

England has 302 savers in 1,000.

Germany has 317 savers in 1,000.

France has 346 savers in 1,000.

Sweden has 386 savers in 1,000.

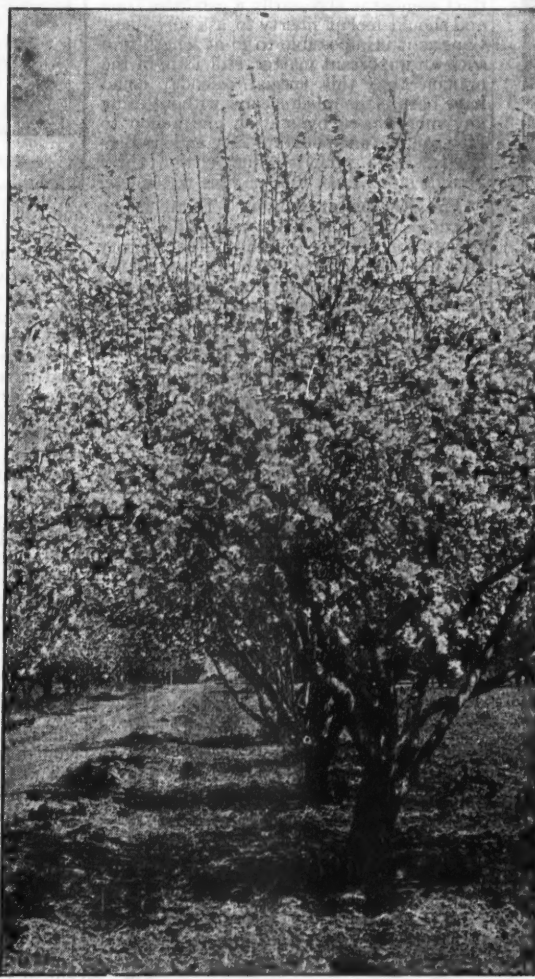
Belgium has 397 savers in 1,000.

Switzerland has 544 savers in 1,000.

The war has had a curious effect on the economic life of America. From being a borrower we have become a lender. We shall have need of our savings all the more when the war is over, for the devastated nations will have need to borrow of us all the more, and we must still carry on our own affairs.

If Spring came but once in a century, instead of once a year, or burst forth with the sound of an earthquake, and not silence, what wonder and expectation there would be in all the hearts to behold the miraculous change! But now the silent succession suggests nothing but necessity. To most men only the cessation of the miracle would be miraculous, and the perpetual exercise of God's Power seems less wonderful than its withdrawal would be.

—Longfellow



cut back severely than where they were not cut back until the end of a year.—C. A. Green.

Peach Peeling Machine

The first peach peeling machine to be installed in a canning factory in New York State was placed in the new factory of the Sodus Packing Company this season. For years these machines have been used in California, where many thousands of cans of peaches have been placed on the market against a few thousand in this state.

The machine solves the problem of handling a big quantity of fruit, 1,000 bushels being handled now where 100 could be canned with the old method. Five peach pitting machines were installed to assist in the work.

Worse Luck—Muggins—What's the matter with Brokeby? He looks worried.

Guggins—He can't meet his bills.

Muggins—That's nothing. I can't dodge mine.—Springfield Union.

Bass Mate

It is probably not known to many people that bass mate as do birds and continue together until the young bass have been hatched out. The mating season begins in early spring. Each pair proceed to build a nest, not after the manner of birds, of course, the conditions below and above water are different in the matter of nest building. The bass mates search out some spot of gravelly bottom. This they fan clear of sediment and debris of any kind. It is an interesting bit of nature study to see this going on. There is a great rush of fins and tails as the fish shoot back and forth over the spot chosen for the fish nest. The water eddies and swirls in the little whirlpool created by the bass. And all the time the cleaning process goes forward until the fish nest is as clean as a Dutch kitchen.

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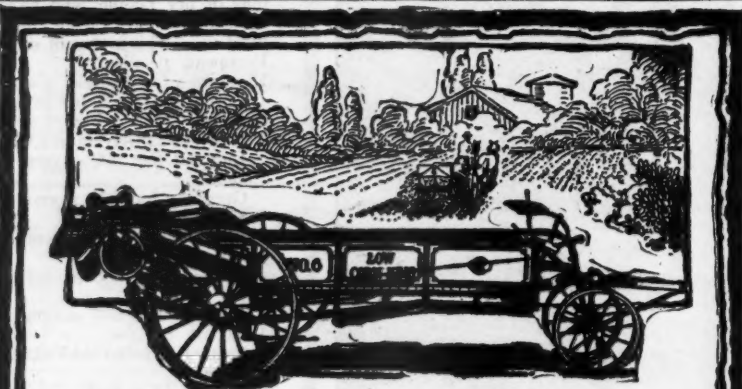


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Notes from Green's Fruit Farm

By E. H. Burson

Not Clear to All. The Editor of the Fruit Grower used nearly a page of the February issue for the sole purpose of instructing his readers as to spraying, and some of us when we came to that page were glad to be reminded again of the value of spraying and, to see the figures showing us in what proportion the various insecticides and fungicides were to be used, but methinks that some had forgotten the meaning of 1-10 when applied to lime-sulphur and 3-50 when applied to arsenate of lead, or perhaps there may be some who never having had occasion to spray, the figures without explanation may be entirely foreign to them, and they may be glad to learn that 1-10 in the instance of lime-sulphur means one gallon of the lime-sulphur to ten of water, or one part of the first to ten of the second, and in the instance of the arsenate of lead that three pounds is to be used to fifty gallons of water when giving battle to the codling moth.

Of course the readers will readily see that the Calendar is necessarily a condensed one and should feel at liberty to ask any questions as it is impossible to go at length into such an important matter, still I am of the opinion that this special calendar could have been made much clearer without using any more space by stating one gallon to fifty gallons, one pound to fifty gallons Bordeaux, three pounds blue vitriol, three pounds stone lime, fifty gallons water, etc.

The Rochester Peach. There is no question but that this peach is a better variety for canning than any other variety that has been tried in our home, and all the leading varieties have found their way into cans if not in one season in another. When I came across the introducers claim that the Rochester needed less sugar when canned than any other variety I was inclined to run a pencil mark through it, but that very evening the Rochester was served for supper for the first time and the statement is not over-drawn in the least.

A Scribbling Diary. A splendid thing for every fruit grower and farmer to have

on his desk or table to be opened every day. For several years I have been using one made up in England, costing me twenty-five cents delivered here, a book 12x8 with a blotting sheet between each page, and the pages printed for each day and month in the year. Unfortunately, on account of the scarcity of paper I was unable to get



A Well Grafted Cherry Tree

one for this year. Get into the habit of dotting it down. It costs little but may benefit much.

Harrow the Wheat. The best piece of wheat and the heaviest cut of mixed hay was secured by thoroughly harrowing the field over at the time of sowing the clover seed in April. Harrowing or drilling clover seed in is sure to become more general. If a farmer fails to secure a catch of clover two times out of six it is about time for him to wake up to the fact that covering the seed will in nine cases out of ten assure a good seeding.

No Fruit. J. J. stated that several years ago he bought a bunch of dwarf pear trees and set them out and they grew, but not as well as he hoped they would, that some from some cause broke off at the point where the tree was budded, that those that lived blossomed every year but that he had not succeeded in getting a single specimen of fruit. He stated further that a neighbor had a row of dwarf pears that gave a good crop every year. What was the matter? I don't know, probably you don't, but I shall guess that the trees were not set deep enough by about five inches, and that the soil was thin and poor. Surely if the trees broke off it is evident that they were not set deep enough, for dwarf pears should be set so that the whole of the quince root on which they are budded and about two inches of the pear is below the level of the land, and if these particular trees had been set this deep they could not very well have been broken down.

Potatoes at 8 Cents. A correspondent to a daily paper of a recent date in calling attention to the high prices of the present time cited the fact that several years ago potatoes could be bought for thirty cents a bushel. Today, I was talking with a neighboring farmer who said that it is not so very many years since he drew from his cellar and delivered to the dealer as prime a lot of potatoes as ever grew at eight cents per bushel.

Nuts Fruiting. The English filberts and the Japan walnuts have fruited here abundantly. Last fall a neighbor brought in a pocketful of English walnuts that he had just gathered from a tree growing a few miles from the fruit farm. I saw at

least a dozen English walnuts trees bearing nuts last fall in or near Rochester. There are none on the fruit farm bearing yet, but there will be some day.

Cut Them Back. Undoubtedly, some of us fail to get a good crop of good quality pears from our dwarf trees because we do not use the pruning shears enough. I saw an orchard last fall containing several hundred dwarf pears six years planted in which a pruning shear had never been seen. The trees stood (or rather leaned) in many instances so much that a team could not be driven within ten feet of the base, and the owner said that he did not like dwarf pears, they did not look good, and did not bear well. I saw another orchard of dwarfs fifteen years planted, annually pruned, strong, healthy, upright, big bodied, heavy headed trees, from which two-thirds of the crop could be gathered from the ground. This orchard delighted the owner. Dwarf pears should be well cut back every season before the sap starts.

Tons of Bulletins. An authority told me the other day that there were tons of bulletins stacked away in the Department of Agriculture store-rooms at Washington awaiting calls from the farmers and fruit growers of the country. It seems to me that among the first things one should do who is contemplating farming or fruit-growing is getting one's name and address on the mailing list of the Department and also on the list of the State Agricultural Experiment Station, and also to secure a list of all bulletins in print, then to make a selection of the ones one is interested in and send for them. These bulletins are ours for the asking. Whether we are interested in hogs, soil, crops, apples, insects or grain or one or more of hundreds of other things, we can get a wealth of information—and no second-hand information at that.—E. H. B.

Bees in the Orchard

The idea that bees do harm in an orchard has been disproved in an investigation made at Florence, Italy. The bees cannot perforate the skin of the fruit, and the damage is due to hornets, wild birds, wind or hail. By sucking injured fruit the bees really prevent fermentation and the spreading of rot. They also render service in the cross pollination of flowers and the resulting setting of fruit, orchards and vineyards frequented by them bear most regularly.

What not to Spray

Sometimes I conclude that many people are deterred from planting fruit trees on account of the fear they have that insects will destroy them or injure the fruit. Much is said in all the rural publications about the importance of spraying, but it must be remembered that these instructions are intended primarily for the orchardist and not so much for the home garden. There are hundreds of thousands of fruit gardens attached to rural homes and city homes where no spraying has ever been done and where fairly good crops are harvested each year.

At Green's Fruit Farm we have never sprayed cherry trees or peach trees (except for curl leaf, which can be done any time during winter). We have never sprayed our strawberry plants or the plantations of blackberry, red raspberry or black raspberry. I have never seen San Jose scale on the peach or cherry. It is more likely to be on the apple or pear. The currant and gooseberry need spraying in early spring to ward off the currant worm which is easily destroyed. Ornamental shrubs and trees seldom need spraying so far as I have ever heard.—C. A. Green.



How to Set Out and Care for Trees

What is more comforting on a red hot day than a row of nice shade trees? To the person who has to be on the street all the time, they are indeed a blessing, says the "Democrat and Chronicle." In some cities shade trees are neglected; that is, not enough of them are planted and some that are planted don't receive proper attention. It requires judgment and good management to have successful shade trees. The soil and materials of which streets are formed is usually ill-fitted to sustain the healthy growth of a tree. It is very necessary, therefore, that selection of trees for your street should be limited to varieties that thrive under the adverse conditions. Taking all the points into consideration, the selection is limited to Norway and sugar maples, Oriental plane, lindens, American elm, red and pine oak, horse chestnut, tulip and Ginkgo. These include all the shade-tree quality desired and readily adapt themselves to their environments.

Care should be taken to have a straight trunk with the head beginning not lower than seven feet, with strong leaders; for on these depend the future shape of the tree. Although the tree is to be more or less formal in shape, its natural habit of growth should be preserved, at the same time keeping it symmetrical and full-headed.

The top should be cut back to about one-third. For the best results, the active leaf surface and the active rootlets must be in direct proportion. The inter-dependence of the roots and leaves is complete. If the leaves are destroyed by insect attack, a corresponding amount of roots die, because they are not fed; if roots are reduced in transplanting, the foliage of the whole top will suffer in proportion, and probably not survive the shock.

The tree should be set about the same depth as it stood in the nursery, the roots spread naturally. Sift fine soil around the roots and work it in close to them with a pointed stick, so that no spaces remain unfilled to within four inches of the top. This is then firmly tamped with a stomper and saturated with water. When it has absorbed all the water it can hold, cover with a loose soil, to act as a blanket in retaining the moisture.

In order to keep the trees growing, constant care is necessary. Cultivation by keeping the ground broken up to retain the moisture is as important for the tree as the cultivation of field crops. Evaporation is taking place over every square inch of soil exposed around the tree.

When the ground becomes hard and baked, the tree receives just one-eighth of the moisture given off each day, but if the ground is covered with a dust mulch practically all the moisture goes through the tree, and is used by the leaves in manufacturing starch and wood.

Facts Worth Knowing

By Geo. B. Griffith

The sugar of Brazil was the first sent to Europe, the Portuguese having set up their works in that country about the year 1580. Their trade in this commodity soon became extremely great and their being so long in possession of it made them grow more careful in the management of sugar than any other nation; so that, even up to a recent period, the clayed sugars of Brazil were finer and whiter than that of any other nation, though the manner of preparing it has been extremely easy.

Diamonds were frequently perceived in washing the gold in Brazil, before they were known to be of any value, and were consequently thrown away with the sand and gravel; and numbers of large stones that would have enriched the possessors passed unregarded through the hands of several persons. At length, a person acquainted with the rough appearance of diamonds, imagined that these pebbles were of the same kind, but it was difficult to persuade the inhabitants, that what they had so long been accustomed to despise could be of such immense value, and in this interval, it is said, that the governor procured a considerable number of these stones, under the pre-

tence of using them as counters to play at cards. But some of them being transmitted to Europe for inspection, were declared to be diamonds, and not inferior in lustre, or any other quality to those of the East Indies. Upon this, many of the Portuguese in the neighborhood of the places where they had been first observed began to search for them with great assiduity; and, as large rocks of crystal were found in several of the mountains where the stream flowed, which washed down the diamonds, they flattered themselves with the hopes of discovering diamonds of a prodigious bulk. But the kings of Portugal, being told that this would debase their value and ruin the Europeans, who had in their possession a great quantity of Indian diamonds, thought proper to restrain the search after them. For this purpose he created a diamond company, with an exclusive charter, which, in consideration of a sum paid annually to the kings, had the property of all the diamonds found in Brazil, but to prevent a reduction of their value, by too large quantities being collected they were not allowed to employ above 800 slaves in searching for them. To engross the whole of this trade, a large town, in the neighborhood of the place where the diamonds were found, and a considerable distance round it, was depopulated, and the inhabitants removed to another part of the country.

The origin and the earliest notice of our friendly memorial books, known as albums, is to be traced to the registers of the deceased that were formerly kept in every church and monastery. Such a book was called the album—i. e., the blank-book in

which the names of the friends and benefactors to the monastery were recorded, that they may be prayed for at their decease and on their anniversaries. The earliest writer belonging to England who uses the word is the Venerable Bede, who in his preface to his prose life of St. Cuthbert, written previous to the year 721, reminds Bishop Eadfric that his

name was registered in the album at Lindisfarne.

Praise for The Burbank Plum

The Burbank is our most profitable variety of plum. It ripens in early August, before the rush of the fruit season is on. The fruit is of a fine appearance, large and red checked. The tree is easy to control and bears good crops, the fruit does not rot like many other varieties, and, with thorough spraying it can be kept free from curculio.

We are setting this variety of plum in sections of the orchard where the soil is not suitable for peach growing, and are having good success with it. From the tree shown in the photo on this page we picked fifty baskets, or ten bushels of plums.—Arthur A. Macelwane.

Get an inexpensive hand-trap and a supply of clay targets and ammunition and add to the list of delightful diversions from the regular routine of farm work. Shooting at the fast flying targets will bring into scientific activity the mind, the muscles and the nerves; developing accuracy, skill and promptness of decision, all of which are essential in character building. You can indulge in this clean sport at leisure times, the practice of which will make proficient wing shots of the participants and when you come to shoot at real game during the open season the results will be much more satisfactory.

It is the height of folly to imagine we can resist the modern spirit of progress and hope to have our boys and girls near us when "the years draw nigh, when thou shalt say, I have no pleasure in them."

We must realize our responsibility to ourselves, our families and to society at large for the better use of the advantages, facilities and opportunities for betterment, which the present time affords compared with a generation ago, and through further efforts along this line we shall gradually acquire a consciousness of the relative dignity of the farming profession.



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From a Car Window

I recently crossed one of the "middle west" states in the daytime. My eyes were a bit tired from reading the printed page so I read the landscape, or rather the country through which the train traveled. It was in the eastern part of the middle west. The country was of course generally flat. There was an abundance of corn stalks standing in the fields. Peaceful cattle in their winter coats feeding on the uncut corn stalks and soft coal smoke coming out of the chimneys gave about the only sign of life on that clear but cold winter day.

An occasional log house, some of them still in use, reminded me of the men and women who first took possession of the prairies and converted them into corn fields.

From the car window about the only sign of vegetation was the corn stalks. Scarcely any sign of vegetable gardens led me to wonder if corn and pork were the only articles of food for man, his herd and his faithful horse. There were no trees, or scarcely any in that vast flat country. I wondered why those thrifty farmers or their wives had not thought more about the houses they live in and their immediate surroundings. There was here and there a runty cedar in the dooryard and an occasional wind-break of poplar or hardy evergreen.

The Country Home

While my heart has always been in the country and I love the country people and the modest country home, I had to confess to myself that it is small wonder that the young people leave such country homes as these for the lighted though crowded cities.

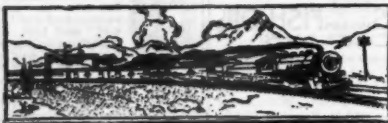
My own country home where I lived as a boy and the village church next door where I first accepted the "Carpenter's Son" as my Teacher and Guide mark the dearest spot on earth to me. This I believe would be the honest acknowledgment of thousands of city men, over forty years of age, if they would tell the truth, the whole truth and nothing but the truth.

As the train ran on through this fertile country I was reminded of the words of Whittier who said, "Dull, dreary flats without a bush or tree."

I really felt like jumping off the train and running from house to house to tell these good people how wonderfully they could improve their uninviting homes and their immediate surroundings by planting a tree, a shrub, a vine, a row of strawberries or other small fruits for their own use or profit; not to mention the greater benefit to be derived to themselves and their State by the planting of orchards in this tree forsaken part of the country. Comparatively few country people seem to realize how much more livable the home can be made by planting a few permanent growing things about the house, dooryard and garden.

A Singing Tree

If a tree cannot be bought for a song it can be purchased and planted for the price of a single song. Fanned into vibration by the passing breeze it will literally sing to you and to your children and to your children's children. A fruit tree of your own planting will bear for you and your children, not the apple of temptation, but life giving fruit which will overcome the bad influence of fat pork. It will increase your income, brighten your home and strengthen the blood with its life-giving fluid. It will be a blessing to your day and generation and for generations to come.



Some one has said "If I knew I were to die tomorrow I would plant a tree today."

An orchard would multiply the income of many farms, add greatly to the value and selling price of the whole farm and be a growing testimonial to the owner's good business judgment.

Crows and Corn

About the only sign of bird life in the eight hour ride across that flat part of country was a crow's nest or two in every tree that showed its head above ground. Crows and corn do not make a good combination but in this case it was an evidence of nature asserting herself against great odds.

Many of the birds have been robbed of their natural homes by cutting down the forests as we have so ruthlessly done in this country. It has been suggested that the insects that attack farm crops have come to the farm crops because their natural haunts in the woods have been destroyed. The least we could do, it would seem, would be

deathbed to his son: "Jock, when ye hae naething else to do, ye may be aye sticking in a tree; it will be growing, Jock, when ye're sleeping."—An Observer.

Rules for Tire Inflation

"An important thing for a motorist to know about his car is its weight in connection with the average load carried," says Jay B. Cothran, manager of the New York branch of a well-known tire company. "By knowing the weight of your car when loaded ready to run the motorist is in a position to regulate his tires so that they not only act as the best shock absorber obtainable but are fit to offset any injuries which may come from over or under inflation."

"With the weight of the car known, when preparing for a trip which includes passengers, it is very easy for the motorist to regulate his air pressure in the tires so that they will run with the least injury to themselves. This foresight will also prevent a break in the side walls caused by an overload or avoid such a high pressure on the tires that they might cause injury to the car by not absorbing the road shocks."

"With the weight of your car, plus the weight of gasoline, water and extra tires, with the weight of the passengers added, you have the total running weight of your car."

"For a quick way of determining what air

pressure by the load he carries."—New York Times.

Peach Marketing on a Business Basis

Peach growing is essentially a manufacturing business. In all successful manufacturing businesses, three important characteristics are pre-eminent.

First of all, we find that every successful manufacturing interest sells a standard article. It is therefore necessary that we standardize our product so that each basket of peaches, bearing the same brand, is uniform in quality. This can probably best be accomplished by drawing up specifications for the different grades, and the use of central packing houses.

A second prominent characteristic of the successful manufacturing business is a knowledge of markets. The business man must know where he can do business; who his competitors are; the peculiar preferences of different markets, and the volume of business he can do profitably in each of these markets.

Thirdly, a successful manufacturing business is characterized by a system for utilizing this knowledge of markets, supplying market preferences, avoiding unprofitable competition, and controlling the volume of his business which is done in any locality.

Need of Comprehensive Marketing Plans

It is important to note here that while sixty-two per cent of the crop went to points outside of the State, it was distributed to sixty-four per cent of the total number of destinations, while the twenty-two and three-tenths per cent of the crop that went to points in New York State north of New York City, was distributed to thirty-five per cent of the total number of destinations. This shows that in spite of statements to the contrary, New York peaches are distributed much more effectively in New York State than in any other region. It also shows that any system of marketing which does not consider markets outside of New York City and New York State meets only thirty-eight per cent of the problem, and tends to increase the congestion in New York State markets instead of widening distribution.

A study of the shipping records of the New York Central Railroad shows that the shipment of peaches from New York State has increased from 1,341 carloads in 1910 to 4,419 carloads in 1915.

While the increase in peaches produced in New York State has trebled in the past five years, there is every reason to look for a still greater increase, because of the fact as shown by the Farm Survey, (Niagara County Farm Bureau Bulletin No. 1) made in 1913, covering eighty-seven farms in the peach region of Niagara County, one-third of the orchards of this region are not in bearing.

The year 1913 is remembered in western New York as a prosperous year for the peach growers, while 1915 was generally disastrous. In 1913, 4,340 carloads of peaches originated along the New York Central Lines, as against 4,419 carloads in 1915. The increase of 79 carloads in 1915 would hardly be sufficient to cause the great variation in prices between 1913 and 1915. The growers have been trebling their production in the last five years by paying more attention to better methods, and by increasing their acreage, but they have paid no attention whatever to increasing production and competition, and wider distribution.

The New York Central Railroad is equally interested in the situation with the fruit growers of western New York, and is co-operating with a committee appointed by the New York State Fruit Growers' Association to devise ways and means of improvement.

A Demagogue

"Father," said a small boy, "what is a demagogue?"

"A demagogue, my son, is a man who can rock the boat himself and persuade everybody that there's a terrific storm at sea."—Woman's Journal.

"Do you like apples?" said the hungry little boy to the sour faced man sitting on a bench.

"No," was the reply.

"Then hold these apples till I get some more," said the boy.—Puck.



A Vine Covered Arbor is Always Attractive

to plant a few trees for the birds to live in. The birds are known to be one of the best protections against the invasions of insects upon farm crops. We can well afford therefore to plant and make possible nesting places for the birds to come and live on our farms, sing to us and eat up the myriads of insects for whose presence we may be directly responsible in that we have destroyed their natural abiding place in the forests.

"Brighten up Your Little Corner"

My friend Rhodeheaver, (I think that is the way he spells his name), has the people sing frequently at the Billy Sunday meetings the song "Brighten up Your Little Corner." I believe that "Billy" himself would say Amen to a word that would lead our friends in the country to brighten their home grounds by planting trees and shrubs and inviting the song birds and others to come and live with them.

I am reminded of what Sir Walter Scott has an old Scotch landholder say on his

pressure you will carry in your tires, if you have no regular table of inflation, the following table is suggested:

"For three-inch tires, divide the weight of the load by 32.

"For three and one-half-inch tires, divide the weight by 40.

"For a four-inch tire, divide the weight of the load by 48.

"For a four and one-half-inch tire, divide the weight of the load by 56.

"For a five-inch tire, divide the weight of the load by 64.

"For a five and one-half-inch tire, divide the weight of the load by 72.

"To further illustrate the working out of the above table, suppose your car weighed 2,880 pounds and you are using four-inch tires. From the above we find that for four-inch tires the weight of the load should be divided by 48. This will give you 60 pounds air pressure, which should be carried in your tires. The tire mileage will be greatly increased if the motorist will regulate his air

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Bateman M'F Co., Box 16C, Greenclock, N.J.

Profits from Apparently Waste Land

By W. L. Haisley

A great profit may often be obtained from the growing of small fruits in the little odd corners of the garden. When we say a great profit we do not aim to have the reader believe we are leading up to some get rich quick scheme. Get rich quick schemes are for the favored few where one dollar is made to double itself in far less time than a dollar usually does in our fields and gardens.

Last season a man bought a small patch of ground containing something near an acre. He broke this up and began planting to various small fruits as the season advanced. Currants, gooseberries, raspberries, blackberries and some other small fruits were set out. He had wanted a plot for setting some strawberries last fall, but decided he did not have room.

"Why don't you set out a lot of strawberries?" a gardener said to this man on looking the plot of ground over in August. "I haven't the room, I wanted to set out a bed of strawberries but just couldn't seem to find the available space. I want to keep my currants and other berries well cultivated and grow a few vegetables between the rows and did not want to plant them there. So it seems I will have to do without the strawberries for a time at least."

"You have oceans of space in there yet if you had only thought about it," responded the gardener. He was a fellow who had always been compelled to utilize every square foot of his own land in the production of vegetables. The other was a new hand at the business, a retired farmer of a little past sixty who had been used to the more extensive methods of an eighty acre farm. He had determined to quit farming and expend his energies henceforth on an acre of ground. This acre was fenced all the way around and had the usual three foot margin of unused headlands.

"You can spade that margin up out there around the inside of your fence and work it down into one of the best strawberry beds you ever saw. With a little stable manure composted over the surface and some good varieties of strawberries you can raise all you will care to pick on the ground which you would otherwise let grow up in weeds and grass."

One day in this present January we drove past the acre of small fruits and saw a fine straw mulch extending all around the inside of the plot and completely covering the row of strawberries now occupying the space of the former waste margin.

"I never had so fine a prospect for strawberries before as I have on that bed I spaded up and set out last fall," the owner informed us.

What will this man get out of his strawberries? We do not know. That remains to be seen. Yet with only an ordinary yield he will make a profit on that ground which has not been productive before. From an apparent lack of space he has discovered a new virgin area. He would not be enabled to utilize this space but for the small fruits. He might have planted this space in any of the other berries and successfully cultivated them by hand. Any of them would yield a good profit on the time and labor invested. In this utilization of waste ground lies the great advantage and profit of growing a number of the small fruits.

Needles

"What is it, lady?"
"I want some needles."
"Yes'm. Knitting, sewing or graphophone?"



Don't Fail to Erect One or More Bird Houses This Year. This One Was Built for Wrens

Jean Jaures on Courage

"Courage consists, in short, in being both a practical man and a philosopher—in understanding one's work, systematizing it, examining it and yet in co-ordinating it with life in general. Courage consists in watching one's machine for spinning or weaving so closely that no thread may break, and at the same time in preparing a more fraternal social order where the machines will be the common servants of free workers. . . . Courage consists in being master of one's faults, not servant to them. To have Courage is to love life and to regard death tranquilly, to strive for the ideal and to understand the real; to work and to give ourselves up to great causes without knowing what recompense,

if any, the inscrutable universe reserves for our efforts; to seek truth and to proclaim it."

There are no circumstances so poor but that character may display itself and make itself therein.

Strength of character lies not in demanding special circumstances, but in mastering and using any that may be given.

Our work and daily contact with our fellows form our scene of action, and God blesses with a peculiar blessing the efforts to put to profit, not some self-selected occasion, but the actual conditions in which we find ourselves.—Scott Holland.

China has the largest bridge in the world,

extending five and a quarter miles over an arm of the Yellow Sea and being supported on 300 stone arches.

Alligators' eggs are eaten by natives in the West Indies and Western Africa. They are similar to a hen's egg in shape and taste, but larger.

The Mannlicher-Carcano rifle carried by the Italian soldier is six inches longer than the British rifle and four ounces heavier.

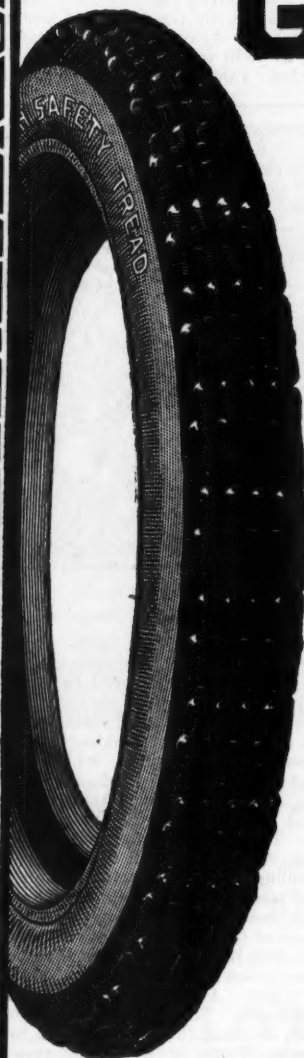
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The Planting About Our Homes

By the Late Prof. H. E. Van Deman

What soul is not charmed with a beautiful landscape? The Creator of the earth, the sea, the lakes, rivers and brooks, is the greatest of all landscape gardeners. The bold mountains, the deep canyons, the vast plains, the lakes, rivers and mighty oceans appeal to us with awe-inspiring force. When we sit beside some babbling brook in a shady glen, with ferns hanging over the banks, and our feet on a carpet of fluffy mosses, nature appears to us in her milder and more poetic forms. All these conspire to awaken emotions of delight, and quiet, worshipful pleasure. To me there is no park, or lawn, or conservatory that does not seem stiff and labored in comparison with the free and easy style of nature's handiwork. Sometimes, when I have been fishing for trout in the deep forests of Northern Michigan, or among the mountains of Colorado or Western North Carolina, I have been forced to stop in the midst of the sport, to enjoy the beauties of the scenery, to watch the streams sweeping in graceful curves through the thickets of cedar, spruce or rhododendron.

These wild scenes are full of enchantment, but we cannot have much of them in our every day life. They are not the consistent accompaniment of our civilization as we most often find it. We must clear off the wild forests, ditch the mossy swamps, make dry, hard roads with easy grades along the hillsides where the brooks come tumbling down. Fields and pastures, orchards and gardens must occupy the ground to serve our more useful purposes. This is all as it should be. It is well that nature should be

surroundings of our living places, some of the ideas and inspirations that come from above. In planning our lawns and driveways we should not get too far from nature, but pattern in some measure after the architect of the heavens and the earth. The stars and clouds are not in rows, nor do the streams run in straight lines. The beaches of our oceans and lakes are laid in graceful curves. Freedom of style pleases the senses. Rows of trees are often monotonous. They are fitting and necessary in the orchard, vegetable garden and field, where the plow and cultivator are used; but in the lawn and flower garden, the less formality the better. Gentle curves, and clumps of shrubbery scattered here and there with proper discretion, give much more pleasing effects. One system, ministers to our stern necessities, the other, is for our amusement and recreation. It may be a matter of convenience to plant the shade trees in rows, and have the roses and asters arranged so they may be cultivated like so many cabbages, and doubtless they will bloom as well planted in that way as in any other, but they do not have that restful, unobtrusive look, that should be a part of all ornamental plantings. Along lanes, roads and avenues, rows of trees planted at regular intervals and neatly trimmed hedges are quite proper. I will agree that it takes much more real artistic skill to locate shade trees in the right places about the house and expose the flower beds upon the borders of the lawn in the natural style of landscape gardening, than to yield to the more common formal practice. I do not believe in curves merely



Can your Home Boast such Beautiful Blossoms in the Dooryard?

subdued, and her resources made available to the higher uses of man.

But in our efforts to utilize these natural gifts, can we not so manage as to appropriate them without destroying every vestige of their wild beauties? If there are forest trees standing near where the dwelling is to be, why not leave such as will be sightly and give ample shade in return for the space they occupy? If a brook runs near by, why not leave undisturbed some of its mossy banks? In each field there might be a few trees left to shelter the stock from noonday suns, when they are used as pastures. They would not only give comfort to the animals, but relieve the monotony of the landscape, when all else is cleared away. I like to see a bit of native woodland left within easy reach of the house, where the children may go to gather wild flowers and carry home patches of moss with which to carpet their play-houses. Some of my happiest recollections of childhood are the hours and perhaps whole days I spent in such innocent amusements. I remember well that when a school-boy, I used to go into the woods near our home, and sitting under the low-spreading umbrella-like branches of a big beech, study my Latin lessons, and commit to memory and speak over to the birds my declamations. It may not be wondered at that I love nature now, for then, I almost daily held close converse with her.

The sight of all these things makes us better, more thoughtful, more humble; because they bring us nearer to the heart of nature, and hence nearer to each other and the heavenly influences. Let us then bring into our homes, our dooryards, and all the

for the sake of making them.

There are certain underlying principles which should be observed in the location and arrangement of all rural homes, whenever at all practicable. The situation of the house and other buildings should be in some convenient place, which is usually near a public road. It should be a healthy one, and on some elevation, to permit of good drainage and the free circulation of air. The stables and feed lots should, if possible, be to the north or northeast of the dwelling, that the prevailing winds in summer may carry their effluvia from, rather than towards the dwelling. An orchard or grove of forest trees either natural or artificial, may be to the north, northeast or northwest, to act as a shelter from the cold storms of winter. A south or southeast frontage is preferable. These important points having been decided, the next thing, is to lay the roads. These, in some cases, may have to be located first, because of the peculiarities of the situation. Streams, swamps, hills or other unalterable objects may face them in, or from certain directions. They should be made to gracefully yield to the nature of the circumstances. Absolute utility would place them on straight lines from point to point, but even on level ground there is no need of this. A planting of trees or shrubbery may be made if there is none naturally there, to interpose at one side, and thus relieve the otherwise unseemly curve. Such an arrangement does not permit the eyes to see the end from the beginning, and gives apparent breadth to the place where there really may be very little. New objects of interest are constantly coming into view,

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as the roads or walks are traveled. There should be no roads or walks made that are not necessary, and that will not be used. They are expensive to make, troublesome to keep free from weeds and grass, and entirely unbecoming except when actually needed.

I believe in lawns—not too large and bald looking, but quiet little stretches of clean shaven grass, bordered with flowers and shrubs, and these in some places backed by trees of stately proportion. They are always satisfying and restful to the eye. Let me say here that I think in many cases where lawn mowers are used, that the grass is kept too close. It is not cut too often, but too short. If two inches are given the grass, it will have leaf surface sufficient to keep it in healthy condition; but when sheared almost to the ground, this is not possible. Watering, need not be done by frequent light sprinklings, but much better, by thoroughly soaking the ground from an open hose whenever there is danger of it becoming dry. Frequent, but not close clipping, yearly fertilizing, and abundant watering, are the three requisites for keeping a lawn in thrifty condition.

If there are beautiful little vistas, or more distant views of streams, ponds, lakes, or the broad ocean; of wooded hills, or mountains from the windows, porches, or anywhere on the grounds, care should be taken not to obstruct them. No landscape may be said to be perfect that does not include water, earth and sky, but we should make the most of whatever of any of them we may have.

The blending and contrasting of the almost innumerable forms and colors of trees, shrubs and flowers in such ways as to produce harmonious effects, is a subject that will tax the most skillful landscape artist. It would on this occasion occupy too much time for me to go into the detail of this important part of the subject. But it is enough to say, that there are plenty of beautiful things which may be easily obtained from the nurseries, seed stores, and from the wild woods about you, that by a little expenditure of money and considerable thought and labor, will embellish any place either in town or country. Dense evergreens should never be set near the dwelling, because they have a dark and sombre

look, and are best suited for backgrounds to shrubbery, or as single specimens standing on the edge of the lawn. A few spreading shade trees, not so near the house as to shade its roof, will always give pleasure in summer time. It should be remembered in planting trees that they are expected to grow, and abundant room should be allowed for their development. Temporary trees or shrubs may be planted for immediate effects, which should be taken out as the necessity for their presence decreases.

One very great mistake that is sometimes made by those who wish to be very tidy and exact in their ornamental gardening, is to trim their trees into fantastic shapes. They make images of cones, balls, cooking utensils, beasts, birds and creeping things. All these may be curious, and perhaps pleasing in some degree, but to most persons of good taste they are out of place, if not actually hideous in comparison with the graceful forms that nature has given them. It seems to me, a sort of ridiculous horticultural barbering—on a par with the cropping of dogs ears, and the snobbish English fashion of docking horses tails. Let us have none of it.

There are many farms and smaller places that might be greatly benefited in looks, in convenience and in actual market value, by a little changing upon the general rules laid down. On new places, there is ample opportunity to make them what they should be. There need be nothing costly in order to be tasty.

Mulching Orchard Trees

While grass grown in the orchard is successful as a mulch it has ever seemed to me to be somewhat wasteful, inasmuch as this grass or hay if passed through the digestive apparatus of cows or horses would yield almost the full amount of fertility. My thought is, that while the grass or hay mulch is desirable, we should search for something less valuable for feed. I know of no better mulch than that secured by throwing an abundance of sods on the surface of the ground around each tree nearly as far as the branches spread, the sods under each tree being first torn up and inverted. I remember as a boy on the farm being often in need of bait for catching fish, which I invariably

found on sod ground along the highway where the pigs had torn up almost every inch of soil. These sods kept the soil beneath moist throughout even a dry summer. While this sod mulch may not be available for large orchards, it could with profit be used by those who have but few trees and desire to do them good service.

In the first place, let these men who have but a few trees turn over the sod under the trees and then dig up the sod extending beyond the branches of the trees and the roots and throwing that under the trees. In order to get the best results these sods should be turned over occasionally or changed from one position to another. However, this method may be thought of it cannot be denied that sods with plenty of earth attached to the roots make an ideal mulch. In planting a tree or shrub upon the border of the lawn I remove the sod to the extent of three feet in diameter. After planting the tree and firming the earth, I place these good sods as a mulch around this tree and find nothing that holds the moisture better or longer.

Humus for the Orchard and Farm

By F. H. Sweet

How to put humus in the soil is the most important step to be taken in all the range of crop production, as well as soil improvement, for on it rests success or defeat. Manure stands first, but since the supply is so limited its benefits must be restricted to small areas. Next in order is commercial fertilizer, but if used alone and continuously is injurious to many soils without the proper rotation of crops. Green manuring, that is, growing and turning under one of the legumes, peas for this purpose, takes first place. Tests have proven that two thousand pounds of green clover, when turned under will make three times as much organic matter as when the same is cured and fed as hay to stock. Plowing should be thorough, and where shallow depth have only been reached, the soil should be broken up an inch or so deeper each year until we get down to about eleven inches. One and a quarter bushels of cow peas sown in May to the acre, using 300 pounds of 16 per cent acid phosphate to the acre,

and turning this crop under when the first pods begin to ripen, or disc the entire growth into the soil and sow a peck of crimson clover to the acre at once in this seed bed, is an ideal plan, and the best, in fact, to practice for soil improvement.

The next spring, say by the middle of May, as soon as the first bloom appears, turn this under with a big plow and apply one ton of lime per acre—bear in mind that crimson clover should not be allowed to get tough before turning under. If this precaution is not taken, the decay will be too slow for the needs of the present crop. Now we are ready for any root or cereal crop that we may see proper to plant. But if we wish to hasten improvement, put cow peas in again early in May, and then, not later than August the 15th, mow off these peas for feed, and sow a mixture of grass seed, composed of red top, timothy and clover. This is for the grass or hay crop. Now it will be observed that this treatment of the soil has been just a little over a year, and yet a lifeless, non-productive, dead soil will produce crop yields two or three times as great as when the work of soil restoration began. By this method nitrogen from the atmosphere, has been made available. But the decay of vegetable matter introduced into the soil has furnished additional nitrogenous material. Deep plowing, good drainage, cover crops, thorough preparation of the soil, good tillage, all take an important and active part in the restoration and the improvement of poor and non-productive soil.

The first almanac made in this country was undoubtedly by Benjamin Banneker, a colored man, born at Ellicott's Mills, in the State of Maryland, in 1732. When thirty years of age he made the first wooden clock known to be manufactured in the United States. He made calculations about the eclipses, tides, etc., and was never known to make a mistake. He corresponded with Thomas Jefferson, and was even consulted by men of science.

Adam and Eve, according to Loames, ate the forbidden fruit on a Friday and died on a Friday.

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When the branches are nearly as large as the main stalk and plenty of fruit-buds started, we remove the tips of all branches as well as that of the main plant. A young branch will appear at every leaf. These are easily and quickly removed. Repeat once a week.

A New Way of Raising Blackberries

By A. H. Jeffrey

I commenced more than thirty years ago, reading "Green's Fruit Grower." I have learned some things about the blackberry that are not taught in the books. I pinched out the tops of the canes of the blackberry and raspberry as the books taught and the fruit papers taught and are still teaching. But for the last twenty years I have not done that way.

As I now do it, it is less work to trim, it can be done with one-half the work, the fruit is bigger and better and it is so much easier to pick. Blackberries are not at their best unless fully ripe, and if they are out in the sun they are very apt to be scalded before getting fully ripe. If the new canes are allowed to grow without being pinched out they will be big enough to shade the fruit so it can ripen better than in any other way.

I have seen it stated in "Green's Fruit Grower" and in many other papers that the tops should be pinched out so laterals will start and set fruit buds.

I just now (January 25th) came in from trimming a row of blackberries, and I went back and counted to see how many canes had laterals: there were more than ninety per cent that had no branches, just the bare canes from 30 to 40 inches high.

They will not need any wires or stakes to hold them up, and will be covered with fruit spurs and in time with big, juicy berries, bigger and better than can be grown on long canes in the sun.

The same is true with raspberries, if they are not pinched back the canes will be large enough so they will not need any support. They need to be cut back to 30 inches or less.

I prefer to mulch blackberries with straw instead of cultivating after the first year or two. They will stand a good deal of coarse manure and straw, and the mulch holds the moisture for them just when it is apt to be dry at ripening time. If anyone doubts the wisdom of this way of trimming, just try it and be convinced.

Norway Spruce for Wind-break

Norway spruce is very hardy, a fairly rapid grower and makes a most excellent wind-break either in hedge or when planted in large clumps, says "Rural New Yorker." For trees three to four feet high a trench two feet wide should be opened. Throw all the top soil out, then put in the trench well-rotted stable manure to a depth of a couple of inches, and spade it into the sub-soil as deeply as possible, mixing it well with the sub-soil. After the manure has been spaded in the full length of the trench go through it from end to end and tramp the sub-soil down with the feet until it is just moderately firm. This is done to prevent settling after the trees are planted. Now fill in enough of the top soil to make the trench the proper depth for planting, mixing a liberal quantity of raw bone meal with the soil as it is put in the trench. The trees may be planted 30 to 50 inches apart, according to how dense a hedge may be desired.—K.

A Mistake with Strawberries

By E. M. Anderson

Whatever you do, don't start strawberries as I did, or else don't get so proud of them. A few adjacent vacancies in the apple orchard left a nice protected spot that looked ideal for a strawberry patch; my father-in-law had one in a similar location that produced berries in abundance for several years, and I wanted one "like Father's." I had the spot fall-plowed, liberally fertilized with hog manure and thoroughly harrowed. When it was as mellow as a garden I set 1,500 strawberry plants, every one of which lived and grew luxuriantly. I cultivated well with the wheel hoe, and by July first they had formed almost solid matted rows. My father is pretty conservative, but he pronounced it the prettiest strawberry patch he ever saw. I was certainly proud of it and "pride goeth before destruction." Soon I began to find wilted plants without any roots, and digging under these usually revealed from one to three fat healthy white grubs. By July 15th, the plantation was practically ruined

and eventually the grubs finished it up. Theoretically, I suppose, I should have used the ground at least one year for a hoed crop, but I thought the fall-plowing would do away with the ordinary dangers of planting on newly-plowed sod. My neighbor set strawberries the same year, on land that had previously been carefully prepared by producing a well-cultivated corn crop, and the grubs ate up her plants too. The presi-

dent of our Country Fruit Growers' Association told me that undoubtedly the white grubs, in my case, came from the hog manure and, as he is a first-class fruit authority, I judged that very probably he was right. Anyhow, I'm going to try strawberries again this year on land that has been under cultivation for years and that I'm reasonably sure is free from grub infestation. I shall fertilize with hen manure and acid phosphate; I don't know what these will do for strawberries, but I know they produce glorious crops of vegetables. The land is tile drained, and I am hoping for much better results, but if I fail this time I shall try again next year. I'm at least, going to have shortcakes if I have to raise the berries in my kitchen.

Home Berries

There is no article of diet more healthful and attractive than the various kinds of native berries. It is astonishing that with the exception of a few wild raspberries and blackberries they are so seldom found on the farmers' table. Berries are available in the fresh state from May until September, beginning with strawberries and finishing the season with blackberries. Besides these we can include gooseberries, currants, red raspberries and black raspberries, all of which are easily grown and should yield abundantly in most localities. All are delicious when canned for winter use, and perhaps their delicate acid flavor can be better appreciated in winter than in summer. Many more farmers would grow enough berries for home use if they could be shown how little work need be expended on their care and cultivation. We have known of farmers who were persuaded to try a small patch of berries for their own use, who later became interested in berry culture, and planted them more extensively for market.

A patch of raspberries will bear fruit for many years after planting. The old canes, which have borne fruit, should be cut out during the fall or winter, thus providing more room for the new growth, on which the next season's crop will be produced. Besides this the ends of the long, slender branches will need pruning back in the spring to 12 or 15 inches in length.

Blackberries

Blackberries are the most vigorous of all, and will continue to produce longer than any other small fruit. Sweet, luscious blackberries, ripened on the briars, have a flavor that no other fruit possesses, and many people prefer them to strawberries for table berries. They begin fruiting the next year after planting, and should bear a full crop the fourth year. The plants are strong growers, and should be planted at least 3½ feet apart in rows 5 feet apart. Numerous plants will come up from the roots, and these should be cut out between the rows, permitting the plants to remain anywhere in the rows, where they are not too thick. It is not practicable to keep them in hills, like black raspberries.

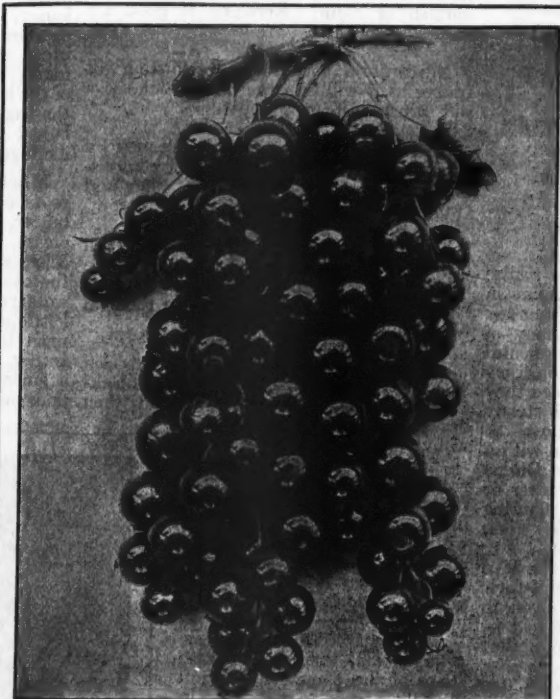
While sandy soils are probably good for strawberries, any soil not too rich will bring good results. The land should be well manured and thoroughly cultivated.

Fruit Trees Destroyed by Insect Attacks

Several fruit trees and some shade trees are attacked by the yellow-necked apple caterpillar, which appears in early summer and will soon pass into the ground for the winter. Apple, pear, peach and cherry trees commonly suffer, but often oak, beech

and chestnut trees are stripped of their leaves by this pest. Young orchards are injured most.

Entomologists at the Ohio Experiment Station recommend spraying trees with three pounds of arsenate of lead paste, or a pound and a half of powder, in 50 gallons of water as soon as the caterpillars are observed at work. Hand picking may be resorted to for small trees.



Red Currants Should Have a Place in Every Fruit Garden

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Mothers

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Member when John went away,
All but mother cried and cried
When they said good-by that day.
She just talked, and seemed to be
Not the slightest bit upset—
Was the only one who smiled!
Others' eyes were streaming wet."
Edwin L. Sabin

A Mother's Opportunity

By Minnie D. Dutton

Few parents in rural communities realize what a golden opportunity is theirs in fitting the minds of their children that they may successfully cope with the many of life's larger problems. The more mental training required for the profession they may choose to follow, the greater need they will have for red, rich blood and steady nerves. These blessings can best be obtained by offsetting mental strain with a close contact with Nature and her Divine Author, which can be had in no better or surer way than by intelligently planting and tending fruit, whether it be trees, vines or shrubs.

Cultivate early in their minds the love for fruit. Let them have the care of their own favorite varieties and teach them to care for them right. The returns will be large and the memory will linger long after youth has flown and oh, what a pleasant memory it is. They cannot begin too young. Spend part of the money they would spend for candy for a few trees. They take up such little space and will be a constant joy for many years.

When spring opens up and the ground can be worked nicely I have about forty young seedling peach trees to set where I want them to grow. The children are as anxious about the setting of these trees as I am. They are to come in for their share too. Already they are planning where they want them. I raised the young trees from seed. Here is how I did it.

I forgot to plant the seed in the fall of the year they were saved. I was told if the seed were cracked carefully and the kernels planted they would grow that spring. I tried some that way and others were planted without cracking, all in a row along one side of the garden. None grew that year but the next spring I was delighted to see a nice row of tiny peach trees pushing up through the soft earth. I cultivated them with a case knife. They made about two foot of growth through the summer. Of course this is too slow a process for profit but the variety was excellent, and the parent trees were themselves seedlings and it meant health to me. Of course these will be set in places not yielding any crops at all at present and I know it will increase the value of the farm.

I would much rather my boys would be interested in such occupation as this than finding their diversion on the street corners of the nearby town or listening to the idle tales of some storebox loafer of doubtful character.

HOUSEHOLD NOTES

Spring time is the cleaning time.

Oil all castors on the furniture as well as the door hinges at this time.

Never spread rugs or carpets until the floors are perfectly dry.

A mixture of linseed oil and kerosene makes a good furniture polish.

Woodwork requires one pound of paint to the square yard for three coats.

If the kitchen linoleum is given a coat of floor varnish it will last three times as long.

Rugs that curl up can be sized by using ten cents worth of glue to a pint of hot water. Apply with a brush.

Use borax to remove finger marks from a

hardwood door. Ammonia will take off the varnish or stain. Kerosene is good for painted woodwork.

Never use a cloth duster for dusting gilt frames as it will dim the polish, but use a soft brush instead.

A delicate wall paper can be cleaned by wiping with balls of dough made by kneading stiff parts of four pounds of flour and two pints of cold water.

To remove old wall paper place a boilerful of boiling hot water in the room and close all doors and windows tightly. The steam will soften the paper, making its removal a simple matter.

A thick paste of starch water applied with a piece of flannel to smoked or blackened ceilings allowed to dry and then brushed off with a soft brush will give good results.

Painted, oiled and parquet floors, linoleum and oilcloth, are injured by scrubbing; wipe them with a cloth wet in borax-water and then with a dry one; milk on a cloth gives a good appearance to oilcloth.

Matting sewed together as carpet is sewed, then bound with strips of the same metal binding that is used to bind oilcloth, looks much better and wears much better than when tacked down in strips in the usual way.

Never starch fine lace curtains very stiff. The coarser the curtains the more starch they will require. Add borax to the starch to help hold the stiffening. Coffee, tea or saffron may be added to the starch for ecru curtains, if their dark color is desirable.

If you do not care to go to the expense of a new linoleum for the kitchen floor this spring, try after planing and sand papering the rough spots, a coat of water stain or of paint which contains plenty of yellow ochre, then apply two good coats of varnish.

Try the following plan when washing a lace door-panel. Wash the glass in the door and leave it ready to replace the panel. Carefully wash and starch the lace, slip in the rods while wet and place in position. Pull the lace straight and it will dry on the door and look like new.

Oiled woodwork will need no cleaning except rubbing off with clear cold water or perhaps with linseed oil. If it has been grained and varnished, it may be cleaned in the same way, and if the varnish is marred and scratched, it can be restored to its former good looks by applying turpentine and linseed oil, equal parts of each, well mixed together, and rubbed in with a silk or woolen cloth.

TESTED RECIPES

Marguerites are delicious to serve with ice cream, lemonade or afternoon tea. Put one and one-half cupful of sugar and one-half cupful of boiled water in a saucepan; let boil until it will spin a thread when dropped from a spoon. Remove from fire and add twelve marshmallows cut in small pieces; pour this mixture gradually while beating constantly on the whites of two eggs beaten stiff. Then add one-fourth cupful of shredded cocoanut, one-third cupful of chopped nut meats and one-fourth teaspoon of vanilla. Drop from spoon on small square unsweetened wafer crackers and bake until mixture is set.

Maple Sugar Delights. Make an icing of one cup of maple syrup boiled until it forms a heavy thread when dropped from a spoon and add this to the stiffly beaten white of an egg. Continue beating until it remains apart when cut through with a knife. Spread quickly upon any plain soda or salted soda cracker and sprinkle finely with chopped nut meats.

Lemon Bread Pudding. A quart of milk, one cup of dry bread crumbs, one lemon, three eggs, one-fourth cup of sugar or more if you like it quite sweet; soak the bread crumbs in the milk and beat until foamy; add beaten egg yolks; grate the rind of the lemon; extract the juice and mix with the sugar; bake in a moderate oven; when baked add the whites beaten stiff as for a meringue. Brown lightly.

Mock Oyster Soup. Twelve oyster roots, one quart of milk, two tablespoons of butter, one tablespoon of flour, one cup of cream, one teaspoon of salt, one pinch of celery salt, one salt spoon of pepper; scrape the oyster plant and place at once in cold water; cut in thin slices and put into a small kettle with enough water to cover and boil until tender. Cook butter and flour together, adding a little heated milk to make a smooth paste; add the remaining milk, flour mixture and seasoning; the cream may

possible to recreation for the wife and children. The free use of automobiles on the farm now makes it possible for the farmer to slip into the neighboring town or city. The ride going and coming is restful, but aside from this almost every village has some form of entertainment such as moving pictures, lectures and concerts. The wise farmer makes the most of the rural church and the service it can give.

Potato Possibilities

A potato may, by proper drying off after boiling, be brought to a state of delicious mealiness far, far different from the soggy lump so often offered. Even the baked potato becomes a finer thing if, before serving, it is held in a towel and carefully pinched. The skin must not be broken, but the potato must be made all soft so that when it is broken open at the table it rolls out quite soft and mealy.

The flavoring of potato is another thing in which few cooks achieve success. Yet a pinch of sugar and a scraping of nutmeg will give a delicacy that is very pleasurable to the palate, but not strong enough so that you can tell why the dish tastes so well.

To Repair a Carpet Sweeper

An efficient method of repairing a sweeper having imperfect or worn rubber rings is to cover the wheels with common electricians' tape, such as is employed for covering joints in wire. The tape should first be wound around the periphery of the wheel until a covering nearly equal to the thickness of the original ring is attained. This should then be secured in place by passing the tape around the ring and between the spokes of the wheels. The gripping power of the tape is fully equal to that of the original rubber rings and the sweeper will be good for service until other parts wear out.

Better farm kitchens mean better farms, happier homes.

Good cooking and the attractive appearance of dishes do much to reduce table waste and promote good digestion.

A well-known writer on household subjects tells an anecdote illustrating what she calls perfect hospitality:

She had gone to call on two old friends, an old lady and her middle-aged daughter, who were in reduced circumstances, and quite unconsciously the caller had overstayed the luncheon hour. The old lady asked her in the most charming way to partake of their lunch, saying quite simply, "Do stay and share our crackers and cheese," and the caller found that the lunch in reality consisted of very little more. They had tea to drink and a Welsh rarebit to toast, but it was served on exquisite napery and the toast was cut in the daintiest slices and the china was delicacy itself. And the simple meal was served without apology with a dignified but generous hospitality which made it far more acceptable than many a more elegant repast.

We all have had similar experiences, with callers arriving at lunch time, but not all of us have risen to the occasion so beautifully.

Nowadays, however, there is no excuse except poverty for unpreparedness in the food line. With the help of canned fish, spaghetti, meats, beans, vegetables and soups to eke out food already on hand a wife should be able to greet her friends with a fair show of cordial hospitality, untinged by a fear lest there may not be enough to go around.

Vinegar's Usefulness.—Vinegar is useful in many ways other than culinary. It will remove shoe-blackening from clothing. It will remove fly specks from almost anything—windows, picture-frames, woodwork, etc.

Vinegar is something of a tonic for the skin, and cures roughness of the skin and chafing, if applied after washing the hands. It should be permitted to dry on.



They Cannot Begin Too Young

be omitted by adding a little more butter; serve with crackers.

A "Woman's Magazine" denies the claim that more farmers' wives become insane than any other class of women, holding that it is the society woman who becomes exhausted physically and mentally with the routine of social functions and the keeping of late hours.

The Editor of "Green's Fruit Grower" is willing to accept this suggestion. There is

It is the aim of this department to present practical articles regarding the Home and Personal Problems. The Editors welcome any suggestions, for changes or subjects which you would like discussed.

hope for all who can get to bed early and have a good night's sleep, and for all who can have a good appetite for wholesome food and are able to digest it. Nevertheless, my advice to farmers is to give all the attention

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CATALOGUE NOTICE

Send 10c. in silver or stamps for our Up-to-Date SPRING AND SUMMER 1917 CATALOGUE, containing 550 designs of Ladies', Misses' and Children's Patterns, a CONCISE AND COMPREHENSIVE ARTICLE ON DRESSMAKING, ALSO SOME POINTS FOR THE NEEDLE (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

1778—Girls' One-Piece Dress. Cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3 3/4 yards of 36-inch material for an 8-year size. Price, 10 cents.

1779—Girls' Dress. Cut in 4 sizes: 8, 10, 12 and 14 years. It requires 4 3/4 yards of 44-inch material for a 12-year size. Price, 10 cents.

2024—Ladies' House Dress. Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 7 yards of 36-inch material for a 36-inch size. The skirt measures about 3 yards at the foot. Price, 10 cents.

2034—Ladies' Dress. Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 8 yards of 36-inch material for a 36-inch size. The skirt measures about 2 2/3 yards at the foot. Price, 10 cents.

2003-2010—A Smart and Serviceable Dress. Waist 2003 and Skirt 2010 are both cut in 3 sizes: 16, 18 and 20 years. It will require 6 3/4 yards of 36-inch material to make skirt and waist of one material in a 16-year size. TWO separate patterns, 10 cents FOR EACH pattern.

2003—Ladies' Dress. Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 1/4 yards of 36-inch material for a 36-inch size. The skirt measures about 3 1/3 yards at the foot. Price, 10 cents.

2012—Girls' One-Piece Yoke Dress. Cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3 3/4 yards of 36-inch material for an 8-year size. Price, 10 cents.

2015—Girls' One-Piece Dress. Cut in sizes: 6, 8, 10, 12 and 14 years. It requires 4 1/4 yards of 44-inch material for a 10-year size. Price, 10 cents.

Order patterns by number and give size in inches. Address Green's Fruit Grower Co., Rochester, N. Y.

It will soften a paint-brush on which the paint has been permitted to dry. Heat the vinegar to the boiling-point and let the brush simmer in it for a few minutes. Then remove it and wash it well in strong soap-suds.

Vinegar is unrivaled as an agent for cleaning dirt and smoke from walls and wood-work, especially yellow pine. It should be applied with a flannel cloth and the flannel washed out in clear water as soon as it becomes soiled and before being dipped into the vinegar again. This makes the vinegar an inexpensive cleaner.

Clean Silver Without Rubbing

An easy and effective method of cleaning tarnished silverware by boiling in a soda and salt solution in contact with a clean piece of aluminum or zinc is recommended to housewives by the United States department of agriculture as a result of studies made by its specialists in home economics. The bulletin sent out on the subject illustrates that the necessary procedure is so simple that it may be followed successfully in practically any home.

The cleaning system known as the electrolytic method has been well recognized for several years.

The tarnish which occurs on silver is not due to oxidation, but is dependent entirely upon the action of sulphur. In most cases the source of the sulphur causing tarnish is rubber, wool, foods like eggs, and the sulphur in the air due to burning illuminating gas and coal. The electrolytic cleaning method depends on the facts that this tarnish of silver sulphid is slightly soluble in the hot solution employed, and that it is broken down chemically.

The Wife

The greatest kindness a man can do is not only to keep his wife accurately informed of all his business affairs, good and bad, but to give her some training in the administrative side of his business at least. With this equipment she will in very truth be a sympathetic working partner with him mentally in his business as well as in his domestic and social life; and he will never be appalled by the thought of what will happen if reverses or sudden death overtake him. Best of all, he will find that she wants to "pitch in" and help and be cheerful about it if the time ever comes when he needs some one to lean upon.

Poetry and Corn

Perhaps we are going to add to the variety of our tables as a result of the high cost of living. In New York city, where the agitation of the food shortage question is acute, they are asking themselves if they cannot profit by taking a few notes of experience from the South, where corn is turned into any number of palatable dishes, from the famous hoe cake to the most delicious corn muffins. Here is the New York Mail going over to the side of corn as follows:

Dr. Barnard tells us cornmeal at 8 cents a pound is equal in value to two loaves of wheat bread.

Based on food value, corn in the form of meal or hominy is the cheapest foodstuff obtainable today.

The South knows corn. To the North and West it is little known comparatively. Again Dr. Barnard tells us 3 cents' worth of cornmeal contains as much nutriment as 91 cents' worth of eggs at 50 cents a dozen, or 56 cents worth of round steak for which you pay 30 cents a pound.

The high cost of living touches every pocketbook. If you would lighten the strain on your purse study the virtues of corn.

Today the American housewife uses 10 pounds of wheat flour to one pound of corn—corn of which we have an ample quantity and wheat of which there is a scarcity that approaches famine.

Cornmeal at 3 cents a pound is equal in food value to six pounds of potatoes, for which the housekeeper today pays 20 cents. It is equal to a pound of cheese, for which she pays 25 cents, 30 cents or more.

It is equal to six pounds of bananas, 11 pounds of oranges, 14 pounds of cabbage.

The corn that we cook into corn cakes, that we eat as hominy and mush, costs only one-tenth as much as some of our breakfast foods.

Cornmeal and hominy contain twice as

much fat as any other cereal except oats, and the world knows the worth of oatmeal.

A man tells an experience of his early life which he says has been repeatedly duplicated. When a small boy he saw a man injured in a gruesome accident. His first feeling was one of repulsion for the poor, mutilated object. But when he was commanded by a physician to assist him on the case, there being no one else at hand, he obeyed, and discovered to his surprise that as soon as he had laid his hand upon the tortured body, in help, he felt his loathing turn to compassion. If we find it difficult to love our fellow men perhaps the fault lies in us. Perhaps we are not giving them the aid that we should give, or perhaps we are giving aid only at long distance.

The Old Arm-Chair

"I love it, I love it! and who shall dare To chide me for loving that old arm-chair? I've treasured it long as a sainted prize, I've bedewed it with tears, I've embalmed it with sighs,

'Tis bound by a thousand bands to my heart; Not a tie will break, not a link will start. Would you know the spell—a mother sat there!

And a sacred thing is that old arm-chair." Eliza Cook.

Clean Up The Garden Before it is Plowed

Before plowing the garden patch this spring rake together and burn all the dead vines, grass, sticks and any other sort of rubbish, and you will save your plants from hosts of plant pests. Scientists at the Ohio Experiment Station have found that cutworms, and adult tarnished plant bugs, squash bugs, cucumber beetles, Colorado potato beetles, Harlequin cabbage bugs, bean leaf beetles and other insects live during the winter in trash about the vegetable garden. Clean culture also tends to prevent many fungous diseases, as wilts and rusts, from spreading.

A WOMAN FLORIST
6 Hardy Everblooming 25c
Roses

On their own roots ALL WILL BLOOM THIS SUMMER

Sent to any address postpaid; guaranteed to reach you in good growing condition.

GEM ROSE COLLECTION

Beau Brumm, Creamy White, Rhea Reid, Rosy Crimson, Clothilde Sargent, White and Pink, Sawdust, Pure White, Radiance, Brilliant Carmine, Free Taft, Brightest Pink.

SPECIAL BARGAINS

6 Carnations, the "Divine Flower," all colors, 25c.
6 Prize-Winning Chrysanthemums, - - - 25c.
6 Beautiful Cosmos, - - - 25c.
3 Flowering Canna, - - - 25c.
3 Choice Double Dahlias, - - - 25c.
3 Choice Hardy Iris, - - - 25c.
10 Lovely Gladioli, - - - 25c.
10 Superb Pansy Plants, - - - 25c.
15 Pits Flower Seeds, all different, 25c.

Any Five Collections for One Dollar, Post-Paid. Guarantee satisfaction. Once a customer, always one. Catalog Free. MISS ELLA V. RAINEY, Box 31 Springfield, Ohio

PARKER'S
HAIR BALSAM

A toilet preparation of merit. Helps to eradicate dandruff. For Restoring Color and Beauty to Gray and Faded Hair. 50c. and \$1.00 at druggists.

"ROUGH ON RATS" ends RATS, MICE, Bugs. Don't Die in the House. Unbeatable Exterminator. Ends Prairie Dogs, Gophers, Ground Hogs, Chipmunks, Weasels, Squirrels, Crows, Hawks, etc. The Recognized Standard Exterminator at Drug & Country Stores. Economy Bait 25c. 50c. Small 15c. Used the World Over. Used by U.S. Gov't. Rough on Rats Never Fails. Refuse ALL Substitutes.



10 Named Gladioli for 25c

10 sorts, all different and very fine. 25c. 30 Gladioli, 30 sorts named for \$1.00—a superb test collection. Many new. 10 Finest Named Canna for 75c. 10 German Iris for 50c. 10 New Giant Montbretias for 25c. Postpaid—All 60 Bulbs for \$2.00. Big Catalog of Flower and Vegetable Seeds, Bulbs, Plants and rare new Fruits Free. We are the largest growers of Gladioli, Cannas, Dahlias, Lilies, etc. JOHN LEWIS CHILDS, Inc., Floral Park, N.Y.

LEPAGE'S
GLUE
MEND IT TODAY



Here's a Danger Spot—Watch It

The garbage can is a menace to the health of your family. The foul odors it emits, brings around flies—noted carriers of disease germs. If you sprinkle your garbage can every day with 20 Mule Team Borax you'll find that it will neutralize foul odors and keep the flies away. Of course this is but one of the many uses for

20
MULE TEAM BORAX

Its greatest use is in the laundry and kitchen. This Borax is the greatest known water softener. It saves soap—saves scrubbing, makes the clothes white and scrupulously clean. This Borax sprinkled in the dish water will relieve you of a lot of disagreeable work.

20 Mule Team Borax
Soap Chips

Soap in chip form. Saves you soap cutting. Blended in the right proportions, one part Borax to three parts of pure soap. Not a substitute for Borax but a time, labor and money saver that will pay you to use every wash day. See the picture of the famous 20 Mules on each of the above packages.

Sold by all dealers



Ten Acres Enough for Small Fruits and Poultry

The desire to have a little home in the country that is expressed in the letter below is doubtless in the mind of so many people at this time of year that we are giving the letter and Mr. Green's answer herewith.

Dear Mr. Green: I am just recovering from sickness—the latest of a number of bumps which we have had to meet in our ten years of married life—and most of my convalescent hours have been spent in dreaming of the possible possession of a few acres of land, near the village, and how to get the most out of them. I have derived great pleasure in reading every word of your "How I Made the Farm Pay, By Fruit Growing," shortening my days of irritation the past few weeks by dwelling on those experiences and others, and building a little place, in my imagination, which may sometime be Home, with fruit, flowers and chickens.

My husband is in business here, but owing to the present stress of times, it takes about all he can earn to maintain our (rented) home, and keep our four babies and selves in our happy, respectable manner. It is not enough to provide for the future.

Now, if my dream materializes so far as to secure the few acres I so covet, will you assist me in helpful suggestions as to the various trees, etc., that will bring best and prompt returns. Very respectfully yours, Mrs. R. J. W.

Mr. Green answered the writer of this letter as follows: I am interested in your description of your circumstances and your ambition to own a little land to be devoted to fruit culture, gardening and poultry keeping. I feel, however, like cautioning those who are dreaming about rural life but who have not had actual experience. There is a vast difference between dreaming of an enterprise and of tackling it earnestly and meeting successfully the trials and tribulations of actual life on the farm.

Having been born and brought up on a farm and having lived on the homestead farm, taken an active interest in working it for many years, I left the farm for city

life. I cannot regret this important step since my city experience developed my faculties and enlarged my horizon. After ten or fifteen years of city life I had forgotten most of the hardships of farm life and fell into the habit of dreaming as you are dreaming of rural showers and sunshine, of inspiring sunrises and sunsets, of the call of the cockerel in the early morning, of the singing of the birds and the buzzing of the bees along the lanes and fences filled with shrubbery, of fishing and hunting excursions, of pleasant drives to the postoffice and to the church and to the neighboring towns and cities, and of the genial neighbors that might surround me. Then I went back to the farm gladly with the necessity of learning over again that farm life is not all poetry or romance, but that a large part of it is laborious and sometimes painful, and yet I can say that the happiest years of my life have been spent upon the farm, and I am sure my wife will make the same statement as regards her experience.

How can anything be more poetic than dreaming of growing strawberries? How quickly they start growth in the spring and how quickly this is followed by the mass of white blossoms, soon being transformed into globes of coral or ruby. But how prosaic is the backache which occurs in weeding these berries over and over again, and in picking the fruit and getting up early in the morning to sell it to consumers.

In reply I will say that there is nothing that brings quicker returns in the way of fruit than the strawberry. Next in order of quick production are the red and black raspberries, and next the blackberries, currants and grapes. Of fruit trees the peach comes into bearing quickest of all unless it may be the dwarf pear. There are certain varieties of apples that come into bearing much sooner than others. The Spy produces only after many years of waiting, while the Wealthy, Banana, McIntosh, Fameuse, Baldwin, King and

Bismarck come into bearing much earlier. As a rule the slower the growth of the tree the quicker it comes into bearing. But apple and pear trees can be forced into early bearing by annual cutting back of the past season's growth to a moderate extent.

I always advise the beginner to start in a small way. Even though you planted but a hundred black cap raspberry plants, a hundred or two of two or three varieties of strawberries, a hundred or two of currants, blackberries and gooseberries, you could gain experience by this small planting and could increase your planting from the increase of your own plants, which is highly desirable.

When you move to your rural home learn whether there may be a man in that locality

helping him are also making competition in the marketing field much more keen. Other growers, too, are taking advantage of improved methods of growing and packing apples. Thus it is that while the annual output of apples upon the markets is not increasing to any great extent, the amount of well-grown, well-graded, and well packed fruit is on the increase.

This, again, might seem appalling to the producer of apples if the increasing consumptive capacity of the apple eating public were not taken into consideration. This, indeed, is the one thing which has made possible the continued high prices of apples. Advertising and improved means of transportation have both tended toward the creation of a greater appetite on the part of the consumer for apples and apple products.

Improved means of refrigeration at storage points and while in transit have also aided industry by opening the way to more distant markets and by extending the life of storage fruit even into the summer months.

A Wagon For Burning Brush

The upper photograph on this page shows a device used by a reader of Green's Fruit Grower when pruning his orchard. The device consists of a plain wood platform bolted to an ordinary spring wagon which has attached to it an iron wagon in which the brush is burned as fast as it is cut. The iron wagon is made of 24 gaugesheet iron and two pair of old harrow wheels. The owner also has a pair of shafts to use on the iron wagon when trimming grapevines and raspberry bushes. He says that he has saved its cost several times over in pruning his 18 acre orchard.

Pruning And Spraying Made These Orchards Pay

Does orchard pruning and spraying pay? The answer is found in the results of co-operative experiments conducted by the Missouri College of Agriculture in forty orchards. These experiments extended over a period of three years. They show first, that a neglected orchard is about the most unprofitable thing on the farm, second, that the best managed orchards are producing more profit per acre than any other farm crop.

The average returns per acre of these forty orchards during the last three years has been as follows: Properly pruned and sprayed areas, total received, \$176 per acre; net profit, nothing. In order to obtain records of the results part of each orchard was allowed to remain in its previous condition—not pruned and not sprayed. The experiments, in view of the results obtained, show conclusively the advantages of renovation.

Possibilities of a Backyard

A reader of Green's Fruit Grower writes us that he has planted on the back part of his city lot 8 dwarf pear trees, 4 dwarf apple trees, 6 plum trees, 6 peach trees, 7 cherry trees, 12 grape vines, 10 gooseberry bushes, 10 currant bushes, a number of climbing roses, garden roses and flowering shrubs.

"Harden off" young vegetable plants by moving them from hot-bed to cold-frame.



who has had some experience in fruit growing who can aid you in planting and advise about methods.

The northern part of Wisconsin is severe on plants, vines and trees. You should bear this in mind and if possible do not locate out of the safety line. Much can be accomplished on ten acres well managed.

No Surplus of Good Apples

An increase of 44 per cent in the present annual supply of apples would undoubtedly swamp the market but as yet there is very remote possibility of such a thing as this ever occurring, says Indiana Farmer.

A study of the actual situation shows that the acreage of both bearing and non-bearing trees in certain localities is decreasing at fully as rapid a rate as the acreage in other sections is increasing. This is due for the most part to failures on the part of orchard owners in these sections to properly spray and care for their trees. Consequently fruit production in these orchards becomes unprofitable and the orchard is left to run to weeds or is cut out altogether. I, myself, have seen acres of orchard in what was a few years ago one of the most densely set producing counties in the country, now going to waste and ruin; unsprayed and neglected in every detail in which care should be given.

This, alone, would be sufficient to counteract the great increase in the acreage of non-bearing trees which have been set, to say nothing of the increased demand. This demand, due both to advertising and to an increasing population, is in reality growing at a much greater rate than is the production of commercial apples.

But aside from the good which better spraying and attention to cultural details are doing, the grower must take into consideration that these very things which are

What Kind of Sprayer Do You Need?



THERE'S A MYERS EXACTLY SUITED TO YOUR JOB.

You can't afford to take a chance with an unknown cheap spray pump, and perhaps ruin your crops or not get results. Have the foresight to choose a MYERS—the very best you can buy—pioneers in the spraying field, and backed by 45 years of pump building experience.

Write us for the new MYERS 1917 Spray Catalog—It's just off the press and the best and most complete edition we have ever published. Then make your selection from the Myers Line—You will find a guaranteed Myers Spray Pump exactly suited to your job. Bucket and Barrel, Small and Medium Capacity, Easy Operating, Patented Cog Gear Hand Pumps and Outfits, or Large Capacity Tank and Power Rigs with Automatic Pressure Control, and many other practical features found only on the Myers; also Nozzles, Hose and Accessories for all kinds of Spraying, Painting and Disinfecting.

NOW IS THE TIME—Ask for Catalog No. SP17—This is the one we want you to have for it gives much valuable information, formulae, etc., and many fine illustrations of plant and tree enemies, which will assist you in your spraying.

MYERS LARGE CAPACITY COG GEAR HAND OUTFIT

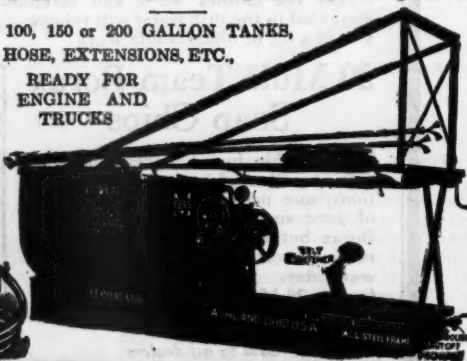


MYERS AUTOMATIC POWER SPRAY RIG

Equipped with Duplex or Triplex Pumps F 12-1751

100, 150 or 200 GALLON TANKS, HOSE, EXTENSIONS, ETC.,

READY FOR ENGINE AND TRUCKS



W. E. MYERS & BRO., 150 ORANGE ST. ASHLAND, OHIO.
ASHLAND PUMP & TOOL WORKS



Draw the Brush Out of the Orchard as Soon as Possible After the Pruning is Done

AUTOMOBILE RULES

A Few Valuable Pointed Suggestions from the Studebaker Farmers' Almanac

Don't run on the battery.
Don't let the clutch in suddenly.
Don't advance the spark too quickly.
Don't race the motor when shifting gears.
Don't abuse the brakes. Apply them gradually.

Don't shift into or out of reverse when the car is moving.

Don't drive fast on wet pavements—the car is liable to skid.

Don't start on a trip without a full gasoline tank and plenty of oil.

Don't descend extremely steep grades without shifting into one of the lower gears.

Don't use dirty water in your radiator.

Don't turn corners too rapidly.

Don't use dirty gasoline. It is well to strain all the gasoline you put in the tank.

Don't run the car if you detect some unusual sound—investigate.

Don't get water into your carburetor or on the magneto gear when washing your car.

Don't use the brakes too much. Slow down the car by means of the clutch and throttle.

Don't let your steering rod connection loosen up so that your wheels wobble.

Don't pass street cars while they are taking on or discharging passengers.

Keep to the right and pass to the right of vehicles going in the opposite direction.

Signal and pass to the left of another vehicle going in the same direction.

Upon signal from a vehicle in the rear, pull to the right and allow it to pass.

Signal vehicles in the rear before slowing down or stopping on the public highway.

Slow down when approaching any cross roads obscured by trees, shrubbery or houses.

Be cautious approaching public meeting places, such as churches, halls and hospitals.

Stop. Come to a dead standstill when a pedestrian becomes confused in front of you.

Stop, look, listen and think, before crossing car tracks. Don't take chances.

Don't allow children to operate your car, to do so might amount to criminal negligence.

The most effective safety device known is a careful man. Get the "Safety First" habit.

In turning corners to the right, turn as near to the right side of the road or street as possible.

In turning to the left, always pass the center of the road before turning.

In cities, never stop your machine unless you are headed to the right of the street.

Never pass other cars at the intersection of streets in the business district. Wait your turn.

Never leave your machine standing in the street with the motor running when there is no one in it.

Never stop your machine at the corners when in cities. Never stop in front of a fire plug.

Most of the materials recommended to prevent motor car radiators from freezing have a detrimental effect on the parts which they touch.

However, denatured alcohol (tax-free ethyl alcohol) gives good results without injury. A quart to each gallon of water is sufficient.

About Tires

The extra tire which every autoist should carry with him should be used to replace one of the service tires at regular intervals.

The tire removed should then be gone over and put in condition. The spare tire should always have the paper in which it is packed for a tire jacket on it.

Tire chains are a safety device of undoubted value, yet remember that they lessen considerably the service life of the tire.

After the puncture in the inner tube has been repaired the tube should be rubbed with soap-stone and allowed to lie for some time in a cool place.

Jack the machine up for winter and save the price of a set of new tires in the spring.

When a tire is changed, if the dust cap and valve washer are slipped between inner tube and casing, a blow-out is sure to result at the point where washer and cap lay on the tire.

Don't make a practice of running in the car tracks. It is a sure way to ruin a tire.

Help Yourself

This is not a plea for successful mediocrity, but it is a plea for a better study of

the science of "distribution"—the placing of one's abilities correctly, where they will be used to the greatest mutual advantage. It is not probable that the business man will seek out your abilities—and immediately recompense you accordingly. It is up to the woman of education or potential ability to seek her best opportunity painstakingly—to prove her worth in the specific direction in which she thinks herself capable—and to sell her services in a businesslike manner for what they are worth. To this extent every woman can be her own "vocational guide"—to study the market for her abilities and sell them wisely.

The Price of Apples Sustained

The quotations for apples in the New York market indicate that the prices are being sustained notwithstanding the fact that foreign shipments have been greatly if not entirely reduced. Baldwin apples are quoted at \$4.00 to \$4.50 per barrel; Rhode Island Greenings at \$5.00 to \$6.00 per barrel; other varieties \$3.50 to \$4.00 per barrel. Fine eating apples, per bushel \$1.75 to \$2.00.

Perhaps those who heard the condemnation, "I was hungry, and ye did not give me to eat," failed to see the hungry one simply because they were not looking for him, their eyes being upon their own desires. Perhaps they would have had compassion on him if they had noticed, but were too occupied to see the wistful eyes watching their feast. The condemnation rests upon them just the same. The opportunity of service that is lost through heedlessness or stupidity is just as truly lost as if it had been neglected through wilful cruelty.

lished happy homes and never regretted having married. If the man is worthy, if the girl loves him, and if he loves her, and the girl is willing to yield somewhat to the different tastes of an older man, and if the older man is willing to compromise somewhat in his tastes and habits to meet the views of a younger wife, I see no reason why these two people of different ages should not marry.

It is possible, however, that your friend may be older than fifty years. Most men at the age of fifty years can scarcely be distinguished from men of thirty-five or forty years of age. As men advance in years they are apt to have a greater desire for home life, for quiet and ease, and less desire for traveling about the world, for evening parties, concerts or other entertainments, whereas the young wife is apt to have a fondness for society and desires to be continually on the go, either in traveling, automobiling or some other means of entertainment. The younger girl should bear in mind that the more elderly man is fixed in his ideas and in his habits of life and cannot be changed in his habits and views so easily as a younger man could be changed. You should take these things into account in deciding whether to accept the attentions of an elderly man, also the fact that the older man is more likely to be an invalid later in life.

To take an opposite view you will be apt to find the elderly man better established in business and with a better developed character and more stability, with fixed habits, than a younger man. If you marry a young man of about your own age you will find him undeveloped. It is impossible for any person to prophesy as to what the

elderly man to marry a young girl.

A girl much younger than I am, seated near me, suggests that it would be much safer for a girl thirty years old to marry a man fifty or sixty years old than for a girl so young as our correspondent, who is only eighteen years old, for the reason that the young girl cannot know her own mind nearly so well as a girl of thirty years. The younger girl may in a few years meet a man of nearly her own age, may fall in love with him, and this might result in serious complication that would break up two and possibly three lives. You will see therefore that, as I have said many times before, making engagements to marry is one of the most serious problems that can come before a man or woman.

Sickness on the Farm

An eminent physician has gone so far as to say that a man has no business to be sick—especially with certain diseases—and science has established the fact that a large percentage of mans ills are clearly avoidable, which backs up, in a way, this physician's statement.

When a person overeats, or consumes too much rich food, no one but himself is to blame for the billious attack that quite frequently follows.

Many diseases follow unsanitary practices of one kind or another, particularly typhoid fever, which, nine times out of ten, can be avoided, and which is usually the result of drinking impure water or milk.

It is most important that every unsanitary feature about the home be eliminated as soon as discovered and this is particularly necessary on the farm, where it is often difficult to get a physician on short notice.

One of the most common causes of sickness on the farm, and one perhaps not fully realized is the outhouse. The open vault breeds all sorts of germs, and bacteria which filter into wells and cisterns. This place in the summer time is feeding grounds for flies and insects of all kinds which later may get into the house and onto the food.

In the winter time invalids and frail people are quite apt to catch colds resulting in pneumonia and other ills from being compelled to use the outhouse.

However, the outhouse has been an institution with us for so many years, that we have perhaps become accustomed to it and so failed to realize the real and startling dangers that surround it.

Fortunately, science has come to our aid with the invention of a chemical indoor closet, which may be set up anywhere in the home, and which gives all the comforts and conveniences of the regular sewage system types in the city. They are past the experimental stage and are giving excellent satisfaction to thousands of users.

Every one knows the value of the health-giving apple. But few people know that for very nervous people, a diet of nearly all apple—cooked or raw—and an abstinence of meat will soon prove a very great benefit to them.

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Should a Young Girl Marry an Old Man

Dear Aunt Hanna:—I read your valuable advice in Green's Fruit Grower every chance I get and enjoy it very much. I am a girl past eighteen. About one year ago I became acquainted with a man fifty years old. I see him two or three times a week in a business way. In our dealings he is very kind to me and shows a liking for me in every way. He is a man of good habits and unencumbered. He has a lovely country home to take a wife to, should he ever decide to get married. I am considered a good housekeeper and love home better than any place else. I always try to wear a modest dress, having no use for the style of the present day. I don't want to get married for a few years, but should he ask for my company what had I better do?

Indiana.

Aunt Hanna's Reply:—I must again caution you as I have cautioned other girls not to make too much or expect too much from the attentions of men or the courtesies they extend to you. I have known girls who, if a man should look their way admiringly or extend common civilities or courtesies, would be thinking that it might result in marriage, whereas the man might not have the slightest idea of marrying the girl or of continuing his slight attentions. But the question which arises here is an interesting one. It is this: Should a girl of eighteen receive the attentions of a man fifty years old, or marry a man of that age?

I know of marriages between people of about the ages mentioned, who have estab-

lished happy homes and never regretted having married. If the man is worthy, if the girl loves him, and if he loves her, and the girl is willing to yield somewhat to the different tastes of an older man, and if the older man is willing to compromise somewhat in his tastes and habits to meet the views of a younger wife, I see no reason why these two people of different ages should not marry.

The elderly man is apt to be established in business and to have laid by a competency which the younger man has not accomplished. This should be taken into account, but I do not advise any girl to marry a man simply because he is well established in business and able to provide a good house for his wife.

Taking a wide view of this subject, it must be conceded that other things being equal, it is desirable that the man and his wife should be of nearly the same age, but that the husband should be five or ten years older. We can see that this is the case if we would assume that all the young girls of the country were married to men thirty years older than themselves. With this broad view of the subject, any thoughtful person would conclude that such unequal marriages were not desirable, but there are many exceptional cases and yours may be one of these. There are many instances of young men marrying women more than twice their age and these people seem to get along well, but it is far more objectionable for a young man to marry an elderly woman than for an

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Letters From Our Readers

"Prudent questioning is the half of knowledge."—Proverb

Starting a Fruit Farm in Another State

Will you give me a little advice on purchasing a farm? I am a man of forty years of age and although in very good health during the open season, when winter comes I suffer with the cold. I simply cannot get used to the sudden changes during our winters. My physician advised me years ago to seek a milder climate, but I staid in my present location because I had two very aged grand-parents to consider. They have now passed away.

Do you think I could succeed on a small fruit farm of twenty to thirty acres and support a family of four all aged people? I have an aged uncle who wishes to live with me. He once owned a fruit ranch in California and made a success of it and I think his experience would greatly assist me in my undertaking. I would be able to purchase a place and could pay cash if not over \$3,000 and have as much more for working capital. I believe one would be much safer in not investing over half of his money in the farm.

I have had a little experience in raising small fruits and considerable experience as a gardener.

My idea is to purchase a small farm in Bucks County, Pa., as I would not be far from the large markets and the climate would of course be much milder than here in Massachusetts. I am afraid to go much further south as I realize that conditions would be so widely different from the east that I could not make a go of it.

Our family have always been used to hardships. We have no extravagant notions, and can live within our means. We are all workers and it seems to me that I might succeed at fruit-growing and squab-raising in a new location.

I might add that I have been breeding pigeons for the last ten years, and have been successful up to the past year, and now the price of grain has soared so high that we can only make ends meet, so in my new location I would only erect a small plant and raise breeding stock to sell, and I can produce and judge a good utility pigeon with any of them.

Do you know anything concerning the soil conditions of Bucks County? Am told that this is a prosperous farming and fruit section. This country is located not far from Philadelphia.

Please let me know your opinion of my project. H. B. R., Mass.

Wherever you go the aged relative you speak of who has had experience in growing small fruits will be of great help to you. I always hesitate about advising anyone to move from one part of the country to another, since it is impossible for anyone to foresee conditions in the new territory or locality to which he is thinking of moving. The winters would be milder in Bucks County, Pa., than in Massachusetts. It is not always that one can jump on to a good opportunity to purchase just what he wants, no matter where the locality may be. It is also difficult to sell the present home on short notice on fair or profitable terms. My experience briefly stated is, that if one wants to sell or buy considerable time should be taken to find a purchaser or to find the purchase that is in every way desirable. While Philadelphia might furnish an excellent market, I have learned that the larger cities are often better supplied with small fruits and other fruits than many small villages in Massachusetts or other eastern states, therefore, it is possible that you might have a better market for your products in Massachusetts than in Bucks County, Pa. I have no experience in raising squabs or pigeons though I am in love with pigeons as pets.

As regards your health, I am situated similarly to yourself. I find the winters at Rochester, N. Y., quite severe and liable to affect my throat, but so far I have escaped serious complications by inuring myself to the climate, getting out daily and exercising in the open air and being very discreet about dress.

In summing up, I will say that you have first the difficulty of selling your property quickly where you now are, and second in finding just what you want at a fair market price in Bucks County, Pa., where you desire to go. I have no knowledge of the productiveness of the soil of Bucks County, but I assume that it is good soil. Do not buy

Our Personal Service Department

Green's Fruit Grower has remarkable facilities for doing personal service for subscribers. Any person who is a paid in advance subscriber for Green's Fruit Grower and writes us enclosing a two cent stamp, will get a prompt reply, no matter what the subject is, but we assume that questions will be mainly in regard to fruit growing and to the purchase of lands and advice as to where best to locate. It is possible that a subscriber may through this personal service get information that may be worth to him \$100 or even \$1000.

Please bear in mind this Personal Service Department of Green's Fruit Grower. When you write us be sure to enclose the address label from a recent copy of your paper showing that you are a paid in advance subscriber. If your subscription is not paid in advance, send a dollar with your question, to renew your subscription for three years. Address Personal Service Department, care of Green's Fruit Grower, Rochester, N. Y.

real estate until you have seen it and investigated carefully, considering every point of advantage or disadvantage in the new locality. Those who have relatives depending upon them as you have should think many times before changing their habitation. You can get some information in regard to Bucks County, Pa., from the experiment station located at State College, Pa. Do not forget that aged people do not fit into new localities and new neighborhoods and acquire new friends as readily as young people, therefore, the man who is along in years might for this reason feel compelled to remain among the scenes of his earlier years.

As to what you or any other person might accomplish on 5, 10 or 20 acres devoted largely to small fruits, depends on so many varied circumstances no one in my position could give much advice. The question of your business ability is important and the character of the soil you propose to cultivate whether sandy, loamy or clayey, or whether on low land which would be affected by frost in late spring, or whether on sloping hills or hill tops. These would all enter into the question, so that you see that I am leaning toward advising you to remain where you are and make the most of your present circumstances. You should consider the expense of moving and of traveling about finding a new location. If you had a friend living in Bucks County, Pa., who could advise you he might be exceedingly helpful.

Care of Raspberries

Last year I had a pretty patch of raspberries and they netted me quite a sum of money. For some reason unknown to me they all died. In September, after they had fruited some months, I cut the tops off about six inches from the top, for I had heard that they would branch out better. Do you think this caused them to die? Did I cut them at the wrong time, or ought I not to cut them at all? I have another patch just coming in and I do not want to make a mistake again.—H. R., Mass.

Any late summer or fall pruning which induces a new growth on any kind of plant, vine or tree, renders those plants or trees more susceptible to injury by winter than if no pruning had been given. I suspect that your pruning in early September caused a new growth and that the plants were winter killed as a result. The time for pruning raspberries is during the winter or early spring before the plants leave out, and in June when the new canes are two or three feet high, but not later than this. The past winter has been one of severe cold and many plants have been injured in different parts of the country.

Moving Trees

I have two Baldwin trees that I would like to move to another part of my land. The trunks of these trees measure 5 3/4 inches in circumference. Could you advise me how to move them this spring? C. F. G., Mass.

The main point in moving trees is to cut as few of the roots as possible and to take along as much of the soil in which the roots are now growing as possible.

We would suggest that you prepare the holes for planting before you dig up the trees and as soon as the trees are removed from their present position cover the roots with burlap while moving them.

In planting them see that all broken roots are trimmed off and that the soil is packed well about the roots in their new position. It would be advisable to cut back the trees somewhat severely before transplanting in order to lessen the demand on the roots for nourishment for the top. By doing this the tree does not suffer from the loss of a few of the roots which are necessarily cut off in the transplanting.

Red Ants Destroy Strawberry Plants

Large red ants build their nests around the roots of my strawberry plants and make their mounds cover the crowns and stems and sometimes the leaves of the plants. The plants and berries wither up and die. When they are pulled up, the roots are covered with hundreds of small white eggs with the ants running over them. Our pansies were destroyed for two years in the same way. I noticed the same thing around dandelions, but of course they were not injured.—G. W. G., Mich.

While we have never heard of red ants infesting a strawberry bed as you describe yours are, we believe that you could get rid of them in the same way that ants are driven out of lawns.

The method used is to pour a tablespoonful of bisulfid of carbon into holes about six inches deep and immediately fill up the holes. In lawns these holes are made about a foot apart but we would suggest that you make one close to each of the plants that are infested.

The bisulfid of carbon is explosive and care should be taken to see that no lights or fire is brought near it. It smothers the ants within a reasonable distance of the holes and should be effective in cleaning up your strawberry bed.

Fertilizer for Peaches

Which is the best fertilizer for peach trees? Cannot get enough of wood ashes—what other fertilizer would be best.—E. C. B., N. J.

Prof. M. A. Blake, of the New Jersey Experiment Station, recommends that the following kinds and amounts of fertilizer be applied to each acre of the peach orchard annually and plowed under:

Sulphate or muriate of potash, 150 pounds,
Ground bone, 100 pounds,
Acid phosphate, 200 pounds.

Where the soil appears to be deficient in nitrogen, especially if the trees fail to make a satisfactory growth the first season, he recommends that 150 pounds of nitrate of soda to the acre be added to the above formula. For the first two or three years, during which time a vigorous growth is especially to be desired on young peach trees, the addition of a fair supply of nitrate of soda is rather important with this formula. When the trees come into bearing it is necessary to reduce the amount of nitrogen, or at least the proportion of nitrogen. It is possible for bearing trees to make too much growth. Excessive growth may interfere with the ripening of the current crop, and also with the formation of fruit buds for the succeeding crop.

Pruning Young Trees

I would like to know when and how to prune young peach and plum trees next last year.—N. B., R. I.

Prune your trees at any convenient time before growth is well advanced. Late winter is preferable. If you reduce the season's growth one-half, it is about all you can do now. This would induce strong growth during 1917 and fruit may be expected in 1918.

Last Black strong shoots clean cut Would plants t and I wi —L. Wi Weak severe p If your h would su to four plenty of

I have planted t has the l these bla wild plum knot. Do cut it dov J. Maine. Cut doe tree that is a probabl rest of you The only black knot several inci infect your cut, by dip ive Sublin the tree is that you cu

How to

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Asparagus b should be top immediately after dressing sho to grow. heavily. To ke ing of salt may are the plants. any of them be berries, it w supply other all when the to The second y should yield a fe until the thi made. The n of the bed at ing of manure th is kept from w ill be.

We suggest th ment of Agricult their Bulletin

Transplan

I have a small have allowed t out a thousand I would like to w the ground Can they then is the best from the runne with strawb Ohio.

After the new tially or comp

Pruning Black Raspberries

Last spring I set out a quantity of Black Raspberries. These made a very strong growth, some of them sending out shoots probably six feet long. I gave good clean cultivation but did not trim any. Would it be advisable to cut back these plants this spring? Rows are six feet apart and I wish to plow between them this spring. —L. W. W., N. Y.

Weak sprawling bushes need more severe pruning than do strong upright ones. If your bushes made a growth of six feet, we would suggest that you cut them back three to four feet to assure good sized berries and plenty of room for cultivating.

Black Knot in Plums

I have two young plum trees that I planted two years ago. One of them now has the black knot. How can I prevent these black knots spreading? There is a wild plum tree near, that has lots of black knot. Do you think that it is best for me to cut it down to prevent spreading? —C. E. J., Maine.

Cut down and burn the wild plum tree that is covered with black knot, since it is probably the source of infection for the rest of your trees.

The only way to stop the spreading of the black knot is by cutting off the affected parts several inches below the black knot and disinfect your saw or pruning shears after each cut, by dipping them in a solution of Corrosive Sublimate, 1-1000 parts of water. If the tree is badly affected we would suggest that you cut it down entirely.

How to Prepare and Plant an Asparagus Bed

Will you please tell me how to make a bed for Asparagus? —R. W. R., N. Y.

The best soil is a light loam. Asparagus will not do well on heavy land. For field culture spread on as much manure as can be plowed in. Then harrow the ground thoroughly, mark out the rows 4 feet apart and plant the roots 18 inches apart in the rows. It would be better to open a furrow about 8 inches deep, and set the plants in it, covering them so that the crowns will be 2 or 3 inches below the surface. Rows should be run north and south, so that full benefit of the sunshine will be secured.

For the home garden, if the bed is a small one, it may be planted by digging a trench 8 or 10 inches deep. Fill this with 6 inches of manure and cover it with soil from the next trench, and so on until the bed is prepared. Rake down smooth. Mark out the rows 2 feet apart, and set the plants 1 foot apart in the rows, so that the crowns will be 2 or 3 inches below the surface. Crowded asparagus beds produce late and smaller crops of very inferior appearance and quality.

Asparagus being a great feeder, the plants should be top dressed every spring and immediately after the cutting season. The first top dressing should be done before the plants start to grow. You cannot manure too heavily. To keep down weeds a small dressing of salt may be used, since it does not injure the plants. If after the plants grow, any of them bear seed, that is little round berries, it will be better to dig them out and supply others in their places. In the fall when the tops are mature, they should be cut, hauled off and burned.

The second year after planting, the bed should yield a few stalks for the table, but not until the third year can a large cutting be made. The more thorough the preparation of the bed at first, the heavier the coating of manure that is buried and the cleaner the crop from weeds, the better the results will be.

We suggest that you write the Department of Agriculture at Washington, D. C., for their Bulletin No. 61 on asparagus culture.

Transplanting Strawberries

I have a small plot of strawberries which have allowed to propagate and there are about a thousand new plants.

I would like to take them up in the spring, mow the ground and set the plants out in rows. Can they be taken up and reset? When is the best time to cut the new plants from the runners? I have had poor success with strawberries. —John McKittrick, Ohio.

After the new strawberry plant has partially or completely taken root it may

be severed from the parent plant and dug then or left where it grew. Only young plants made last season with white roots are suitable for transplanting. Never transplant a strawberry plant which has dark roots for those are too old and are of no value. Strawberry plants should be set out as early in the spring as the soil will do to work nicely without being too wet or sticky. Set them in rows 3½ feet apart, 12 to 18 inches apart in the row.

Reply to M. E., of Vermont, about small fruit planting.

I think your plan with the old currant bushes is the right one. Do not plant anything until the ground is thoroughly prepared and the old sod thoroughly rotted. This advice should be continually forced upon the attention of those who are planting small fruits especially. Think of the labor saved by subduing the grass and weeds before you plant the strawberries, raspberries or currants, rather than attempting to subdue the soil after the planting has been made, which is impossible.

I would say plant 500 red raspberries, 500 black cap raspberries, 500 blackberries, 500 currants, 300 gooseberries, 10 quinces, and from 20 to 50 grape vines.

I should prefer spring planting for Vermont since you have cold winters. Plant so that everything can be cultivated with a one horse cultivator. Leave plenty of room to turn around at each end.

Raspberry Culture

Will you give me instruction about caring for raspberries both black and red. Also for blackberries.

The red raspberries sprout from the root so badly I don't know what to do with them. You can answer in next copy of Fruit Grower. —M. J. T.

Blackberries require rich soil and shallow cultivation so as not to disturb the roots. Old dead canes should be removed in early spring, the soil should be kept free from weeds and grass and the ends of the canes should be cut back so that they are self-supporting. If you support the canes by tying them to stakes, the canes may be left longer but even then the branches of the canes should be cut back.

Red raspberries are entirely different from the black since they do not propagate from the tips of the branches as do the black caps, but from the roots, which send up new canes.

Fertilizer for Strawberry Plants

Can commercial fertilizer be broadcast on strawberry plants in the spring before growth begins without injury to the plants? If so, what kind would be best on sandy soil that is not overly rich?

Can plants be removed from a matted row in the spring before blossoming time without injury to the remaining plants? —L. V. C., Ohio.

Commercial fertilizer can be broadcast on strawberry plants in the spring before growth begins without injury to the plants. An application of 150 pounds nitrate of soda to the acre is best. Plants can be removed from a matted row in the spring before blossoming time without injury to the remaining plants.

Inquiries from Oregon

1. We have three aluminum stew pans. What things are safe to cook in them? We hear against their use. Is it safe to cook fruit in them? How about porcelain or granite ware?
2. Some recommend the Shiawassee apple. Please give both good and bad qualities of both tree and fruit.
3. The nursery catalogues offer the Ben Davis apple tree, the Gano, the Arkansas Black and the Black Ben Davis. Are they not all varieties of the old Ben Davis? Is the Gano a better apple than the Ben Davis? Is Arkansas Black still better? Is Black Ben Davis best of all and good? One catalogue says, Arkansas Black "scabs badly, is a shy bearer and unprofitable," while two speak highly of Black Ben Davis. Please tell us fully about these trees and their fruit.
4. Can the Bing cherry be easily and successfully budded or grafted into a Centennial?

(Continued on Page 30)

BEES PAY BIG PROFITS

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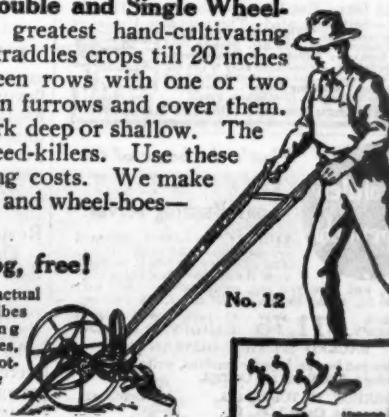
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Poultry Dept.

POULTRY NOTES

Examine the little chicks very closely for the small mite.

It is best to feed young poultry by themselves and not with older ones.

Keep a good supply of water before the young chicks.

The early hatched chicks lay the next winter's eggs.

Keep the little chicks busy by feeding small grains in fine litter.

Never select the largest duck eggs for hatching; they are usually infertile.

90 VAR'S All breeds Poultry, Eggs, Ferrets, Dogs, Pigeons, Hares, etc. List free. Colored Des'c 60 page book 10c. J. A. Bergey, Box 7, Telford, Pa.

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GREIDER'S FINE CATALOGUE of fine bred poultry for 1917; 67 breeds illustrated and described; information on poultry, how to make hens lay, grow chicks—all facts. Low price on stock and hatching eggs. Incubators and brooders, 25 years in business. This book only 25 cts. Send today. **R. H. GREIDER**, Box 44, Elmore, Pa.

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DAY-OLD CHICKS of quality guaranteed to 1,500 miles. Eggs for Hatching at low prices. Bar Rocks, S. C. W. Leghorns, B. C. and R. C. Reds, W. Wyandottes, Buff and W. Orpingtons. Chicklet catalog free. **GOSHEN POULTRY FARMS**, R. 4 Goshen, Indiana.

Tells why chicks die E. J. Reefer, the poultry expert, 314 Reefer Bldg., Kansas City, Mo., is giving away free a valuable book entitled, "White Diarrhoea and How to Cure it." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 50 per cent of every hatch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books.

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That's the boast of the Absolutely Dependable CORRECT Coal-Burning Hoyer BUILT ON a correct, patented principle—and built RIGHT. You can depend on it to raise your flocks, to reduce chick mortality, and give you big, sound birds. Costs only 2c. to 5c. a day to run. **FREE** 25c. f.o.b. Factory, 41-1/2 inch CANOPY, \$11.75 31-1/2 inch CANOPY, \$12.85 BACKED BY OUR GUARANTEE Before you buy an inferior machine, write for FREE literature describing the Correct. **CORRECT HATCHER CO.**, Louisville, Carroll Co., O. **Government Protected** by Patents

Chick size grit and fine charcoal should be kept before the young chicks at all times.

For hatching purposes take the eggs from the hens that lay best. Build up; never let the standard down.

If you do not grade your eggs, someone else will, and you will pay him for doing it.

The bone-cutter soon earns its cost by converting what would otherwise be waste into a splendid chicken food.

Some test the eggs on the seventh and again on the fourteenth days. Others test but once—on the tenth day.

Mites are sure to accumulate if the droppings are not removed every week, and the roosts sprayed with kerosene emulsion or disinfectants.

The breeding-stock should be fed, and compelled to exercise, as the other laying hens are. This insures the fertility of the egg and causes the chicks to be strong and healthy, which would not be the case if the breeders were allowed to become over-fat.

The best way to disinfect a hen-house is with a good coat of whitewash, to which is added a spoonful of crude carbolic acid, diluted in about a pint of water, to each pailful of wash. For inside use, it may be made by slaking in boiling water, then thin to the proper consistency for use in the spray pump or with a brush.

Select a healthy hen and try her for a day or two on the nest before risking valuable eggs under her. An odd number of eggs—usually eleven, thirteen or fifteen—should be used, particularly in cool weather as they lie in a more nearly perfect circle. As soon as the hen becomes broody make a nest for her in a separate hatching room or a place where the other hens will not have a chance to disturb her.

The best work that can be done for fowls in winter is to lay in a good supply of litter and dry dirt under shelter. It is the scratching in the winter that keeps them in the best laying condition.

Both salt and linseed meal are valuable adjuncts to the bill of fare, but they must be used with discretion. Too much salt will cause bowel trouble and loss of feathers and too much linseed meal will have a similar effect.

Soft shelled eggs indicate that the ration does not carry sufficient lime or that the hens are too fat. Oyster shell should be kept before the hens all the time. Strictly speaking oyster shell is not grit, though it does to a certain extent assist in grinding the food. The main purpose of oyster shell is to supply the hens with lime needed in the formation of bone and egg-shell.

The Color of the Yolk

I have been conducting a number of experiments to study the effects upon the flavor and color of eggs, of feeding different foods and flavoring materials. It is quite unnecessary to say that if eggs can be produced having a more agreeable flavor than ordinary eggs they can be sold to special customers at a considerable advance over the usual market rates, says "Farmer's Review."

The grains fed either alone or in combination in my experiments were corn, wheat, oats, Canada field peas, cow peas, soy beans, peanuts and sunflower seed. The flavoring materials employed were trimethylamine, celery oil and oil of sassafras. Beef scraps were fed to balance the different rations except in one case when smoked herrings were used. The green food supplied consisted of sugar beets which were readily eaten.

Quite contrary to my expectations, the flavor of the eggs was not noticeably altered

by any of the rations of flavoring materials employed, except in one instance where feeding onions imparted a very distinct and undesirable flavor to the eggs.

The different rations, however, very clearly affected the color of the eggs. When the grain rations consisted of wheat, oats or white corn, fed either alone or in combination with each other, the yolks were so light colored that the eggs would be quite unsuitable for fancy trade. When the grain supply consisted entirely of white corn, the yolks were very light colored, while on the other hand the feeding of yellow corn imparted to the yolks that rich yellow color which is so desirable.—A. E. V. Illinois.

Effective Method for Destroying Poultry Lice

All species of lice which infest poultry may be quickly destroyed by the application of a very small quantity of sodium fluorid, according to the annual report of the Chief of the Bureau of Entomology just issued. Entire flocks of poultry were cleared of the parasites in this way and were found to remain free when ordinary precautions were taken against reinfestation by contact with infested fowls.

In connection with this work the entomologists of the Department made the first complete studies of the chicken mite and determined that it depends exclusively upon the fowl for its food and will not develop in any stage on filth or similar substances. In tests of a large series of insecticides it was found that a few thorough applications of crude petroleum to the interior of poultry houses will completely destroy the mites.—W.

Winter Onions for Poultry

By John J. Iatke

Here's an idea—what about winter onions for poultry? Poultry keepers who have tried onions declare they are a most wonderful help for increasing the production of eggs. It is a well advised fact that onions chopped fine and fed once or twice a week will greatly increase the number of eggs, if fed during the winter when a good ration of green feed is most scarce.

The suggestion should be sufficient, but perhaps a few extra words would be well said. Supposing you have a small space to spare, some out of the way space, what I ask, could you grow that will produce a bigger return upon the same ground, and with the same care, as will be returned with planting that space into winter onions. I dare say that you cannot mention another crop. Along the fence, here a nook, there a corner, any old place where the ground grows fine weeds, profits will come if that space is set to Winter Onions and they are given sufficient care the first season to give them a start. A start is all that is required. They will help themselves ever afterwards.

In the above I stated that Winter Onions will grow without care once they get set, but I always give them the attention of keeping the bigger weeds from among them. I however let them shift for themselves otherwise, letting them spread as they will. In the fall I take the spading fork and dig what I feel I'll need during the freezing months when the ground is solidly frozen. These I store in a cellar or shed as convenient. In the shed I pile straw over them to prevent hard freezing and often thawing. I dig the onions here and there a forkfull being careful to allow enough to remain for multiplying for the next seasons' crop. The onions will in this way continue spreading from year to year until a solid bed is formed. Spread manure over the onions left in the ground during the fall and winter, being careful when using poultry manure to spread it very thinly. Poultry manure is always dangerous to use over growing crops as it is so strong it sometimes kills the crop. Onions will stand considerable of poultry manure however.

I find using a sausage-grinder (food chopper) to be the most convenient way of chopping the onions. A good big machine will grind them quickly. Where the flock is large, an extra large food chopper with belt power and a small gasoline engine comes in mighty handy. A large quantity may be chopped at one time. These may be successfully kept provided they are left to freeze and are put into an earthen-ware crock or in a wooden keg. They will form the corrosive in galvanized vessels and must not be stored in these. About half of a morning's feed, half and half each, of onions and ground

feed will make a splendid mash. Feed this two or three times a week.

Summing up, when planning the season's crop this spring, supposing you consider getting a good start of Winter Onions. Plant sufficient of these to give you an idea what they will do in the future with your flock. It won't be an expensive trial, to say the least, and I believe, once you give the try-out you will grow the Winter Onions, not only in the fence corner, but in the best garden soil as well. I consider these my most paying garden crop. Easy to grow, easy to harvest, tears to grind them, but best of all, eggs to gather.

Give the Hen More Attention

On the farm, where the poultry have been receiving good care, and have been giving a splendid return in profits for it, it would be well to take steps to increase the accommodations. Go into egg and poultry production on a large scale. Before raising a much larger flock, be prepared to handle it to the best advantage. Have sufficient quarters to house the birds properly. Crowded winter quarters would be less profitable than a small flock with sufficient room to exercise in.

Plan to hatch a double supply of early chicks next spring, making sure that the eggs used are from only the strongest, most vigorous working hens. The chicks must be given a chance for a healthy rapid growth by preparing for their coming months before the eggs are laid. It is a mistake to hatch eggs haphazard from anything and everything, just because you want a lot of chicks.

The 200-egg hen is a possibility when selection and breeding are given the necessary attention. The few who took up this line of breeding, with such startling results, soon created a spirit of emulation among other fanciers. Now there are a great many flocks of pure-bred fowls that have been line bred for egg production for years.

Unwholesome Germs in Eggs. We are accustomed to think of an egg in an unbroken shell as sealed from contagion and absolutely pure and wholesome, but such may not be the case. We are told now by men of science that poultry feeding upon the refuse of stables and upon diseased meat or decayed meat is liable to produce unwholesome eggs, that is eggs which contain poison germs or germs of disease. It stands in hand therefore to see that our poultry are fed pure, wholesome food and not upon decaying food, especially decaying animal food.

The Care of New Hatched Chicks

By H. L. Kempster

Millions of chickens are lost each year because of improper methods of feeding. Some of this loss can be prevented by using the plan of raising chicks which has been worked out by the Poultry Department of the University of Missouri.

Chicks should not be fed until they are forty-eight hours old and then should receive nothing but fine, white grit. This stimulates the digestive organs and prepares them for food which is to follow. The feeding should be a mixture of three parts finely cracked wheat, three parts cracked corn and one part steel cut oats, dry.

Some of this mixture or commercial chick food should be in the litter at all times to encourage the chicks to exercise.

Twice daily the chicks should receive rolled oats or a mixture of three parts crumbs, three parts corn bread and one part boiled egg. This mixture may be fed dry, it may be slightly dampened with sour milk. Young chicks should always have access to clean drinking water or if possible skim milk or buttermilk. These should be kept in a vessel so constructed that the chicks cannot get themselves wet.

Activity Indicates the Laying Hen

Activity is the life of the laying hen. Her activity decreases, so does her egg production. The hen that stands around day and scarcely has enough energy to feed placed before her, is never a laying hen, says C. S. Anderson, Colo. Agt. College. Laying hens should never be fed in quantities as to satisfy their appetites. Whole grain should be fed very sparingly in the morning, and heavily at night. Not only keeps the birds more active through the day, but a heavy feed of grain at night keeps their bodies warmer.

Straw, hay, alfalfa chaff, leaves and cut corn stover all make good litters. Shavings and sawdust are not best because they tend to pack, and also hold dampness. Regardless of the kind of litter used, it should be renewed frequently and never allowed to become badly contaminated with droppings.

Exercise can be further encouraged by suspending a head of cabbage, or a few roots, above the reach of the hens. At butchering time a part of the offal, or a raw bone hung in a similar way, will keep hungry hens on the jump most of the time.

Green Onions for Young Chicks

Young chicks require a quantity of green stuff in their rations and, after experimenting for a number of seasons and convinced there is nothing that will equal onions if properly prepared, and young chicks reared with onions added to their diet you will never find any cases of gape, worms or bowel trouble.

When testing your eggs lay aside the clear ones, but be very sure there is absolutely no sign of life in these eggs, then after the chicks have been removed from the incubator and received their first feeding of grit and a few feedings of what ever food you have chosen take a few of the eggs and boil them thoroughly fifteen or twenty minutes so they are perfectly hard and dry, chop them up, shells and all very fine then take one small onion for six eggs and chop this in the same manner adding to the whole enough rolled oats to make a rather dry flakey substance.

As chicks for the first two or three weeks should be fed five or six times each day you will be able to alternate the onion and egg mixture with grain and you will be pleasantly surprised to see how the little fellow will grow and how well and vigorously they will keep.

You will also find the onions very good to feed occasionally to the larger growing birds if you feed a noon day meal of moist mash.—J. B. Bacon.

Incubating and Brooding Chicks

The breeding season is again here and if you are using an incubator you will do well to again freshen your memory on these points.

Leave the chicks in the incubator in a semi-dark room for twenty-four to thirty-six hours after they are hatched, the quiet rest will give them a good start.

Have your brooder disinfected and the nest up ready for the youngsters, but watch it well as over heating is just as bad for little chicks as a chill.

Keep a close watch for insects as they very quickly take a chicks vitality and permanently retard its growth for the entire season and cause the bird to be a scrub.

Last but not least, keep plenty of fresh water within reach and feed only clean wholesome foods, as sour, musty or tainted foods will affect its system as quickly as baby's.—M. E. Bacon.

The shells of eggs are porous but nature coats the egg shell in a way to partially protect its contents. If the eggs are washed this natural protection is largely removed, therefore eggs should never be washed unless intended to be used speedily. Almost anything applied to eggs that will tend to make the contents hermetically sealed will protect the eggs from deterioration, but the application of varnish or whatever the substance may be must have no odor. If the medium has an odor it will be conveyed to the interior of the egg. Water glass would be the best medium for protection when applied to the shells of the eggs. Almost any druggist can tell you about water glass and how to use it.

Use Whitewash or Kerosene

The free use of whitewash or kerosene does wonders in getting rid of mites. It is used thoroughly over every bit of the interior of the hen's home. A clean house, free from these torments is a real blessing to the hens. Puts money in your pocket. The hen mite or red spider feeds on the poor hens at night while they are in the roost and saps their life to such an extent the egg yield is largely reduced. Sometimes the hens are killed by mite attacks.—Selected.

It is not paying for the necessities of life that keeps most of us poor; it is paying the luxuries.—The Youth's Companion.

Why Farmers Should Plant Trees

"Why do not more farmers plant trees?" is the question that any one would naturally ask when looking at the various places on the farmer's land where trees would increase its value, by protecting exposed areas, controlling erosion, conserving the water supply, and adding to its attractiveness. Many farm homes need trees for beauty and shade. Trees should be planted to provide shade, too, for the animals. Often in winter they would be much better for a wind-break of evergreens, for it has been proven by tests that the animal that is warm and comfortable will not require as much food as the one that is exposed to all kinds of weather says "Pennsylvania Farmer." Then again they should be planted for their commercial value. Fence rows might, in a few years, produce dollars where now there is nothing. Farm woodlots are deteriorating that should be replanted as the larger trees are taken out. On every farm where there are stony, hilly fields that will not produce satisfactory crops, and which never should have been cleared, such land should be reforested.

The kind of trees which the farmer should plant depend on where he intends to plant and for what purpose. There is many an orchard or fruit garden, planted in exposed areas, that would be winter-killed if it were not for a wind-break of trees. For this purpose Norway spruce is ideal. It is perfectly hardy, grows on any kind of soil, and under any conditions. For a wind-break they should be planted about 6 feet apart. In fields where erosion is taking place, trees with large root growth should be planted. Black locust, on account of its great root growth, is just what is needed to control this, though in other situations this very root growth would be undesirable. When the farmer studies the situation he will find that there is a tree for every use he wishes.

A Successful Orchard

Luther E. Hall, of Ionia, Michigan, has 85 acres in orchard of which 60 acres are Spys. He has one 20-acre orchard 25 years old that has borne 12 successive crops, and each succeeding crop was heavier than the one which preceded it. The trees are 40 feet apart each way says "Pennsylvania Farmer."

Mr. Hall does not believe in fillers, but grows annual farm crops. "Before I sold an apple," he said, "I had sold enough farm crops to pay cost of orchard." When the trees come into full bearing the orchard is sown to Canada peas and "hogged" down. The older orchards are plowed and cultivated every two years, and sown to clover and rape about the middle of June. Five to eight hogs to the acre are turned on to consume the clover and rape, and this feed is supplemented with corn three times a week. The hogs are nearly as effective as arsenate of lead in eliminating codling moth, and Mr. Hall has never had a tree injured by the hogs. The trees are headed six feet high, but when loaded with fruit the limbs nearly touch the ground.

It is just as important to rotate garden crops as field crops, and it is certainly a great mistake to plant the same crop on the same ground three or four seasons in succession.

Do not prune lilac, syringa, spirea or any shrubs which bear flowers on the wood of last year. Spring pruning will mean no flowers this year.

Make the most of your porches this summer. Begin to plan now. Plant some quick growing vine for shade. The common lima bean vine yields bountifully of its fruit and the foliage is both beautiful and dense.

Two Characters

By Marvin L. Piper

Old Grumble lives in the alley
That is named after him;
Where evil spirits rally
When the daylight groweth dim.
He grumbles 'bout the weather,
And the way everything goes,
And take it all together
He's a croaker of woes.

Young Cheerful lives in the valley
Where lovely flowers bloom,
And love and sunshine rally
To banish care and gloom.
With words and deeds of kindness
He cheers the passing throng;
And scatters joy and gladness
With his jolly laugh and song.

Luther Burbank

While I have known Luther Burbank for twenty years through correspondence, I have never had the pleasure of meeting him personally. A few years ago on his way from California to New York City he did me the honor to call at my house, but I happened to be absent at the time and did not see him.

He is a bachelor, I am told. He is not over medium height. He seems to be rather frail physically and possesses a nervous temperament, which keeps his mind under a continuous strain. His enthusiasm for his work, while doing much to keep him youthful, is a drain on his strength. There never was a more enthusiastic horticultural experimenter than Luther Burbank. It is enthusiasm which has carried him so far along the roadway to success. No one without great enthusiasm can hope to succeed in any enterprise.

While Charles Downing succeeded by grafting in making one apple tree produce fifty varieties of apples, I am told that Luther Burbank has succeeded in making one apple tree produce 500 varieties, but this may be a slight exaggeration.

It is not unusual for Mr. Burbank to have upon his extensive grounds many thousand new varieties of plum, peach, pear, apple, quince and other tree fruits in addition to many small fruits. He has trained his eye to such an extent that he can go over the rows of seedlings and pick out during the season of growth those that are most liable

to produce superior fruit. This process might seem to be impossible, but those who are familiar with the leaves on worthless seedlings and the leaves of superior seedlings can readily understand how Mr. Burbank makes these selections, by which thousands of varieties are destroyed where only a few varieties are preserved for further tests simply on account of peculiarities of foliage and growth.

There have been notable hybridizers of fruits and flowers before Mr. Burbank's day, but none of these men of early date have been so widely known and appreciated as Luther Burbank. This is partly owing to the fact that he has been well advertised. He appeared at a time of great interest in fruit-growing and had the ability to make pertinent and attractive statements which were eagerly published by the press. He was also a talented lecturer. It is seldom we find a man who is talented in so many ways as Luther Burbank. His competitors were perhaps equally talented in producing valuable new fruits, but they had not the ability to make themselves known as has Luther Burbank. But even Mr. Burbank, accomplished as he is, has given intimations of late that he is not a financier.

"Luther Burbank, His Life and Works," by Henry S. Williams furnishes interesting information about this talented man.—Charles A. Green.

Buckwheat hulls make very good litter for young chickens.

Bees

are known to be among the best friends fruit growers have. Without their help it would be almost impossible to produce large crops of high class fruit. Every fruit grower should therefore keep bees and read



Gleanings in Bee Culture

published at Medina, Ohio. It is a handsomely illustrated magazine, devoted to bees and beekeepers, to honey and honey production, and to home interests. It is known throughout the world as LEADER IN ITS FIELD. It tells its readers how to get the most (in health, pleasure, and money) out of bee-keeping. Whether you have one hive or a hundred you will want to read this first class bee journal. Regular price \$1.00 per year.

Poultry

keeping can easily be combined with fruit growing and the poultry will be very helpful in keeping the orchards and fruit fields free from insect pests. Every poultry keeper should read the



American Poultry Advocate

It is published monthly at Syracuse, N. Y., and is devoted to the interests of all practical poultrymen. It is helpful in all branches of poultry work to the beginner as well as the expert. Tells how to get eggs at the least cost, how to feed to get best results. SECOND TO NONE in its value to poultry raisers. It will help you to success with your poultry. Regular price \$.50 per year.

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Farm Department

A Series of Blunders

By J. E. Ryan

While I could never be classed as a fruit grower I have made so many attempts toward supplying our own home with apples and small fruits, with all these attempts ending disastrously, that I am therefore setting my experiences down here in order that others may profit by my mistakes.

We are dairy farmers but appreciate the value of a well-kept orchard and so practically without exception during the last fifteen years we have every spring received from six to twelve apple trees bought from nurserymen, and these were faithfully set out in as correct a manner as our knowledge of fruit permitted.

According to this we should have a well-bearing orchard today, but—we have three four-year-old apple trees which are thriving fairly well and that is all. The reason for this is, that the only place which seemed available to us for an orchard was in an open space surrounding the farm buildings and to which the cows had access. Sometimes the trees lived two or three years doing very nicely but in the end the cows "got" them, breaking them off, snapping branches and finally ruining them completely.

At last we awoke and realized that the trouble with our fruit-growing was not the

entire United States were afflicted with this dread malady which gnawed at their vitals and would ultimately cause their death. The amount of it was the only sure way to avoid "Black Heart" when buying trees was to obtain them from the nursery which he represented. It seems that his people had discovered a method of grafting known only to them which made the disease called Black Heart run away and hide. It would have nothing to do with their trees at least. We were satisfied a long time after that his nursery did know the "grafting" business to a T.

Another of this agent's new ideas was that we had been making a mistake in planting our fruit trees in the spring. Plant them in the fall, he said, and he would replace any that died during the next five years. (He got his coin quicker by fall delivery, this being the month of August).

Well, it sounded so plausible that we ordered a nice little orchard, as did most of our neighbors, planted them in November, packing some good hard frozen chunks of earth around them, and setting them out in our new, fenced-in plot. I can say one thing for that agent, the trees didn't die of Black Heart, they succumbed to exposure. Not a tree that he sold in the locality budded forth the next spring and if we could have found our friend with the drawl he might have re-



Compare this Farm Home Surrounded by Fruit and Shade Trees, with The One on the Opposite Page

trees but the location and we resolved to set out a real orchard in a small field devoted exclusively to that purpose and fenced off from cattle interference. This, I think, was a step in the right direction but we were not destined to be fruit growers for just at this time along came a nursery agent who wore the most expensive clothes and possessed a tongue more oily than I have ever been able to discover in the head of any other human being.

He staid for dinner and told us in his strong Southern drawl that all the apple trees in our locality were slowly dying—dying of "Black Heart" he explained. In fact, he said, that most of the trees in the

placed them, but his presence at that time was as hard to locate as was the disease called Black Heart in the trees which he had sold.

So you see, there are at least two things which can make you fail in fruit-growing—wrong location and buying from an unknown nursery. If the knowledge of my mistakes will help others to avoid similar ones then I shall feel that their detriment toward me has been considerably lessened.

Made Tenant a Partner

Making the tenant a partner in the farm business has worked successfully for four years on the farm of Robert E. Booth, Vice-President of the City Center Bank in Kansas City. Mr. Booth owns a farm of 220 acres twenty miles southeast of Kansas City. He found that he couldn't live in the city and conduct the farm successfully with hired help. He tried leasing it at an annual rental and the tenant neglected the buildings, the fences and took all he could from the land without returning anything. Then he happily found the solution.

Just four years ago Mr. Booth entered into a five-year partnership contract with Edward Davidson. Mr. Davidson had been employed on the farm at \$40 a month to do such work as Mr. Booth directed. Mr. Booth owned the livestock, implements and feed on the place. He sold a one-half interest in the livestock, implements and feed to Mr. Davidson, taking his note for it at six per cent interest.

Half the Ownership, Half the Profits
"Mr. Davidson furnished his labor and I furnished the farm," Mr. Booth said recently. "Each furnished one-half the stock, equipment and feed. If any extra labor is

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necessary, I pay my half. An accurate account is kept of all the products and livestock sold from the farm, and after the expenses are deducted we divide the proceeds."

One year Mr. Davidson made \$100 a month. During the entire four years he has averaged more than \$60 a month. He was paid \$40 a month before the partnership agreement began. There is his interest in the increase in the livestock besides. The agreement has worked so successfully it probably will be renewed when the first five years' lease expires in another year.

"There is a big advantage to the landowner in having the tenant or the partner as much interested in the land and the livestock as the land-owner. The tenant has a direct and financial interest. He is a partner in the business. He must stick to his job and show a personal interest if he desires to succeed. If he takes measures to increase the fertility of the soil and makes more corn and hay, it helps him. He knows he is going to be there five years and longer as a partner if he does his job well.

"If he goes out cold nights to save a calf, he has saved his half as well as mine. Our interests are mutual in that farm and the livestock and crops. We can talk over things that are to the best interests, and vice versa. We are working together on a common ground, each understanding and being in sympathy with the interests of the other."—*Weekly Star*.

Nut Bearing Trees for the Farm

By W. L. Haisley, Ind.

The growing scarcity of nut bearing trees throughout the rural districts of many states should be a subject of real concern. Here in Indiana we were once blessed with a variety of the various wild nuts that showered their way down from the branches of the shagbarks, the butternut, the black walnut, the

man and will grow better than those dug wild from the woods. The wild nut trees have very long tap roots which drive straight downward into the soil to a great depth in most cases. Very small trees may sometimes be successfully transplanted but the larger ones usually die through the necessary cutting of this main tap root and the lack of laterals. The nursery shagbark or chestnut is usually grafted on a different shape of root and makes a more branching root system that stands transplanting well.

The English walnut is being rather widely planted in many of our Hoosier cities and a great number of young trees will soon be in bearing. They are standing the winters seemingly as well as the other native sorts and the growth is rapid. Why cannot the farmers avail themselves of this opportunity to provide a supply of these delicious nuts for themselves in the future.

The one great handicap with the farmer seems to be his stock. The horses and cows, pigs and calves are allowed the run of the entire farm at certain seasons either carelessly or accidentally and browsing stock are the enemies to young trees. The farm residence and other buildings on the up-to-date farm afford a good windbreak in most cases sufficient to shield at least a few choice sorts of nut trees where no other space is available. But for the stock many other odd corners might be utilized for the purpose. One might it seems provide a sort of protection for a few years till the trees had made sufficient growth to prevent browsing and trampling. Old discarded rolls of wire fencing placed about the trees would serve as a barrier and means of protection in the back corners of the farm.

The commercial price of nuts should be quite an inducement to plant a number of these trees. The demand has been steadily increasing for some years due no doubt to

what it is cracked up to be."

"What is the trouble?" asked a bachelor friend.

"Money," said Mr. Thompson. "The wife is always asking for money. Morning, noon and night; breakfast, dinner and supper; awake and in her sleep, it is nothing

but will I give her money."

"Well," said the bachelor friend. "What does she do with all that money?"

"I don't know," said Mr. Thompson. "I have never given her any yet."—*Exchange*.

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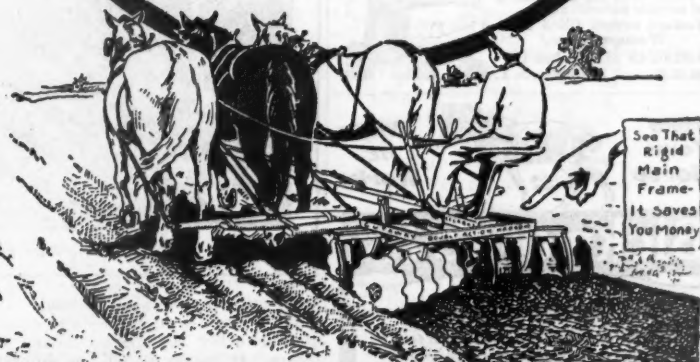
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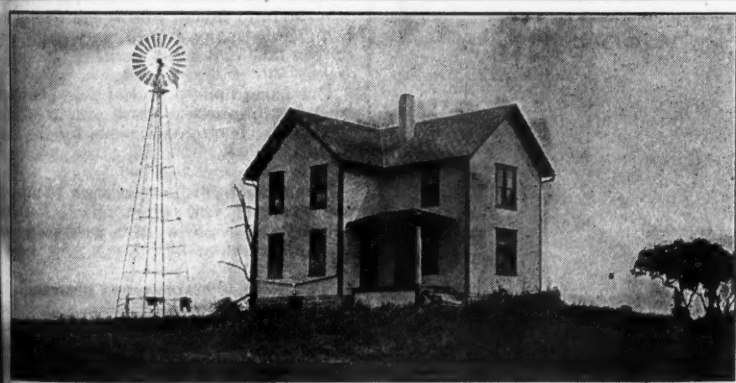
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Compare this Farm Home with the One on the Opposite Page. Which Place Would You Rather Call Home?

chestnut and the chinquapin oaks. The open spaces of the forests were often full of the hazel brush from which great clusters of hazel pods filled with brown nuts could be gathered in the fall. But with the further clearing of the wild growths many of the nut trees went too and we can but feel that much of the glory of the sunny autumns has gone also.

The average farmer might well arrange to plant a few of the choice nut bearing trees for shade and future fruitage about his home and also in the fruit orchards. Not long since we were privileged to reside in a certain large Michigan city for a time during the early fall. Many of the streets of this city were shaded by chestnut trees and during this autumn the young folks had great fun harvesting the crop that cost no money and certainly gave a lot of pleasure. It seemed as though a breath of the country might have pervaded the denser portions of that great city and brought with it a bit of the once popular rural pastime. That these city dwellers have done the farmer can do, and the farmer who is so fortunate as to own a piece of land can do a great deal more. Where the crowded urbanite can boast of but a couple of trees or the farmer can plant a whole grove and utilize the shade for his stock during the hot summer months if necessary. The grove may act as a sort of windbreak in the winter. In selecting a spot for a young nut orchard, however, any waste corner on the farm may be utilized. Stock and especially hogs damage the young trees more or less by rubbing and biting about the base of the trunks. The trees will not cost any great sum if procured from some reliable nursery-

the growing scarcity of the wild trees. The farmer and small town resident have been forced to forego their once annual pleasure of ranging across country for the one time abundant harvests and now buy this pleasure by the pound at the store. One of our chief aims should be to procure trees and once more provide a good home supply of this most delicious and nourishing of foods.

Shipwrecked Seven Times

Charlie Gunn, a well known Liverpool seaman, has been through more big wrecks than any other man alive. He was on board the Titanic when it sank in mid-Atlantic; he was a seaman on board the ill-fated Empress of Ireland; and he was rescued from the torpedoed Lusitania, to mention three of the biggest disasters at sea within recent years.

Although he has been twenty-eight years at sea, and during that time has been shipwrecked seven times. His first shipwreck was when on the sailing ship St. Kilda, which had a mast torn out of her off Cape Horn some twenty years ago.

Recently he was appointed to an Admiralty transport, but the other seamen refused to let him stay, for they asserted that something would happen to the ship if this modern Jonah was on board. So the Admiralty had nothing to do but discharge Charlie Gunn, and send him back to the merchant marine.—*"Tit Bits."*

Good Short Stories

Light-hearted Bill Thompson was light-hearted no longer.

"Marriage," said Mr. Thompson, "is not

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On Buying a Farm

There are a great many things to take into consideration in the buying of a farm. The markets, the roads, the schools and churches, the kind of people in the neighborhood, the character of the land, all these are of vital importance to the success and future welfare of one's enterprise, says The Farmer's Guide. It may not be of much profit to get good land at a reasonable price, that is so far from markets and with such poor roads that crops can not be transported. The character of the schools and churches have a very important bearing upon the character and development of children, and one must live and deal with neighbors, so they should be of the kind one would wish to have his children grow up among.

Quite often in a new country it costs so much to improve the land and put it in

condition for cultivation that land in a well-developed section is just as cheap, even at a higher purchase price per acre. We once heard an old man, who had gone west in the early days and spent the greater part of his life developing a homestead tract, say that what the pioneer farmer did not pay for his land in money, he more than made up in hard work, privation and hardships in getting it into a state of profitable cultivation and in bringing about livable conditions for his family.

Good land, suitably located, is always worth a high price. If it is a good farm, well-equipped with buildings, and is situated so the owner and his family are in touch with progressive citizenship, it is worth years of toil and even privation if necessary to pay for it. But one is never justified in making a sacrifice in the education of his children and in the happiness of his family to secure land at a bargain price. Health and happiness are essential to contented living and to be contented and happy should be more desired than to acquire success and wealth.

Soy Beans in the Young Orchard

When an orchard is first set it is usually a problem to find a crop of some kind that can be grown among the trees that will bring in a little revenue off the land while the orchard is coming on and yet find a crop that will not injure the trees but will enrich the land.

I have set several orchards in the last few years and have tried raising different crops in the orchard with varying success. How I came to notice the effect that the crop has on the trees that are in the orchard was: Four years ago I set two apple orchards,

CHOOSING BREEDS OF SWINE Whichever One the Farmer Selects He Should Develop to Its Highest Possible Standard

To assist hog raisers and prospective hog raisers in determining the best breed of hogs to keep the United States Department of Agriculture has recently issued a new Farmers' Bulletin 765, Breeds of Swine. According to this bulletin, there is no best breed of swine. Some breeds are superior to others in certain respects and one breed may be better adapted than another to certain local conditions. The essential point is that after the farmer has once decided upon the kind of hog to raise he should stick to his decision and develop the chosen breed to its highest possible standard. It is not feasible for some individual to raise several different breeds and bring them to perfection. In making his choice, too, the farmer should be guided by the kind of breeds already established in his locality. If he selects one of these he is not likely to make a mistake.

There are two distinct types of swine, namely, the lard and the bacon types. Swine of the lard type far outnumber those of the bacon type in the United States. The lard type is preferred by the people of this country, consequently the majority of feeders produce a rapid fattening, heavy fleshed lard type. The bacon type is not raised extensively in the United States. The production of choice bacon is more general in those sections where the feed of the hog is more varied and where corn is not relied upon as the principal grain for hogs.

The principal breeds of the lard type are the Poland China, Berkshire, Chester White, Duroc Jersey and Hampshire. The lard

decayed vegetable matter or in the droppings of animals in the pastures. However, these will be almost negligible.

(3) Fly traps are essential. They catch the flies coming from breeding places and thus prevent their migrating to the house.

(4) Enlist the co-operation of all dealers in food supplies. Show them the danger from flies and what may result from unsanitary surroundings of their premises. If necessary, patronize only those dealers who keep their premises and their products properly screened. They will soon clean their premises and eliminate flies if the campaign is brought to them in this financial light.

(5) Endeavor to obtain community co-operation in the fly campaign. Do not be discouraged if a few people cannot be induced to clean up their premises. As soon as they see that the campaign is effective they will readily co-operate.

NOTES OF INTEREST

Sweet clover on that patch of worn out land or on that run-down pasture may surprise you.

In planting around a home, the large trees and shrubs should have first consideration. Flowers may then be used around the borders of the grounds, near the foundation of the house, along a wall, in the garden.

Before the days of railroads there were more home grown things on the family table than there are today. During the coming year there may be fewer vegetable dishes on family tables unless there are more and larger home gardens planted this spring.

The scarcity of farm labor is a very real one at present. While there seems no immediate solution for it more careful planning of farm layout and operations would help. How many extra time-wasting steps do you take in a day's work?

One-half to one pound of acid phosphate to every 16 square yards of soil, in addition to manure, is often advisable for the home garden.

The roads furnish a yardstick to measure the value of any community. A settlement in a country that is not worth a good road is not worth living in.

The yield of staple crops per capita has been declining in the United States—that means more farmers, better acre yields or that we are going to depend more and more on imported food supplies?

Estimates on the total production of leading varieties of apples in the United States show Baldwins leading with 18 per cent of the total crop; Ben Davis a close second, and Northern Spy third. For place is held by the Winesap and fifth is the Greening.

Potato seed is likely to rot before germinating, because of cold, wet soil, planted too early. Usually potatoes may be planted earliest on the lighter soils and the lower elevations. For much of the state, the crop may be planted as late as June 1 to 10 to best withstand heat and draught. (Cornell publication 112.)

Turtles, Hatched by Hen, Keep For Mother Crazy Looking After Them
Muskogee, Okla.—Several weeks ago Francis Frain found a nest with turtle eggs on the bank of Frand River. He carried them home and put them under a hen.

A few days ago Frain heard a rumbling in the henhouse, and on going out he found that the hen had hatched out the bunch of turtle eggs and was almost trying to keep track of her strange brood. Soon, however, she became reconciled and now she is as happy as any old hen could be with genuine chicks. She scurries around the lot, with the little turtles following after her, and when she finds a cluck and the little fellows scurry to her from all directions.

The ancient Greeks called the rainbow "The Scarf of Iris," Iris, in their mythology was the attendant of Jupiter, always represented as being exceedingly beautiful.

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A Young Pear Orchard Intercropped with Cabbage

both on the same kind of land. In one of them I raised corn and oats in rotation and in the other soy beans during the four years. It is easy to tell the difference now for the trees in the orchard where the beans were grown are considerably larger and much nicer looking than the ones in the other orchard.

Soy beans are the best crop that can be grown in a young orchard, for several reasons: First, they will grow on any kind of land no matter how poor it is; second, they are a crop that has to be cultivated several times during the season which is just what the orchard needs; third, they will make several bushels of seed per acre and the hay is as good as alfalfa or any of the other legumes, and last but not least, they are one of the legumes and will continually improve the land.

Soy beans can be planted with a drill or corn planter some time during the month of April and ought to be cultivated several times during the season. They are great drought resisters and are an almost sure crop.

I am setting another orchard of apples with peach filler this spring and prepared for it last season by raising a crop of soy beans on the field and found when I plowed it that the ground was as loose as ashes which I think is a good thing for the young tree.

I wasn't much of a believer in soy beans until I tried them but now I think they are one of the coming crops and will be grown much more in the next few years than they have in the past, for hay and seed as well as in the young orchard.—W. B. Hutchinson.

type of hog is low set and compact, with a very wide and deep body. The shoulders should be full although not coarse, with full hind quarters and hams carried out straight to the root of the tail and thickly fleshed down to the hock. The flesh should be thick and evenly distributed throughout the body.

The size and weight are largely determined by market conditions. At present pigs weighing from 175 to 250 pounds ordinarily command the highest prices.

The principal breeds of the bacon type are the Tamworth and large Yorkshire, both of British origin. The bacon type is very different from the lard type, being longer in leg and body, with less width of back, and lighter in the shoulders and neck. The first impression that this type conveys is one of leanness and lankiness. Much emphasis is laid on the development of the side, because it is the side of the hog that is used for the production of bacon. On the other hand, large, heavy hams are not desirable on a bacon hog.

Detailed descriptions of the various breeds, with discussions, are contained in the bulletin already mentioned.

Suggestions For the Fly Campaign

(1) Kill as many flies as possible when they appear in spring. These first flies are the parents of the millions of germ-laden flies that will make life miserable throughout summer. One fly killed early in the spring is equal to millions killed in August or September.

(2) Endeavor to prevent flies from breeding or feeding on the premises. Some flies will escape because they will breed in

Timely Hints for the Home Gardener

Vegetables For Winter Use

There are a number of vegetables which, though grown in the summer, are usually planted for use in the following winter. An adequate supply of these produced in the home garden will do much to make the family's winter fare more attractive and more economical. Among garden products of this type may be named cabbage, carrots, parsnips, turnips and rutabagas.

Both early and late varieties of cabbage are grown extensively. In the North early cabbage may be planted in the hotbed during February and transplanted to the open ground as soon as the soil is ready to be worked. For a late crop it is customary to plant the seeds in a bed in the open ground in May or June and transplant them to the garden in July. For cabbage of this character the soil should be heavier and more retentive of moisture than for early cabbage, which requires a rich, warm soil in order to reach maturity quickly. For the late variety it is not desirable to have too rich a soil, as the heads are liable to burst. Cabbages should be set in rows 30 to 36 inches apart, the plants standing 14 to 18 inches apart in the row.

To store cabbage the heads should be buried in pits or placed in cellars. One method is to dig a trench about 18 inches deep and 3 feet wide and set the cabbage upright with the heads close together, and the roots embedded in the soil. When cold weather comes the heads are covered lightly with straw and 3 or 4 inches of earth put in. Slight freezing does not injure cabbage, but it should not be subjected to repeated freezing and thawing. Early cabbage can not be kept, as it does not stand hot weather well. It should be used soon after it has formed a solid head.

Cauliflower is cultivated in much the same way as cabbage, but when the heads begin to develop the leaves may be tied over them in order to exclude the light and keep the heads white. Cauliflower requires a rich, moist soil and thrives best under irrigation. The tender heads of this vegetable are boiled with butter or cream, and also used for pickling.

The roots of the parsnip are dug late in the fall and stored in cellars or pits, much as cabbage is, or else are allowed to remain where they are grown and are dug as required for use. All roots not dug during the winter, however, should be removed from the garden, as they will produce seed the second season and become of a weedy nature. When the parsnip has been allowed to run wild in this way the root is considered to be poisonous.

The seeds of parsnips should be sown as early as convenient in the spring in rows 18 inches to 3 feet apart. The plants should later be thinned to stand 3 inches apart in the row. A rich soil with frequent cultivation is necessary for success with this crop. The roots are boiled until tender and then cut in slices and browned in butter or roasted with meat in the same way that potatoes are.

Carrots are cultivated in practically the same way as the parsnip, but are not thinned so much and are allowed to grow almost as thickly as planted. Those not used during the summer are dug in the autumn and stored in the same manner as parsnips or turnips. If there is a surplus it may be fed sparingly to horses and cattle.

Turnips are used largely in combination with potatoes, cabbage, and meat in boiled dishes. They are also mashed like potatoes and are a desirable addition to the ordinary winter fare. They require a rich soil and may be grown either as an early or late crop.

For a late crop it is customary to sow the seeds broadcast on land from which some early crop has been removed. In the North this is generally done during July or August, but the usual time is later in the South. The plants are quite hardy and the roots need not be gathered until after several frosts. They may then be stored in a cellar or buried in a pit outside. Before storing, the tops should be removed. If an early crop is desired the seed should be sown in drills 12 to 18 inches apart as early in the spring as the condition of the soil will permit. After the plants appear they are thinned to about 3 inches. Two pounds of seed are required to plant an acre.

The rutabaga is quite similar to the turnip and is grown in much the same way. It re-

quires more space, however, and a longer period for its growth. It is used to a considerable extent for stock feed and has the advantage of being quite hardy.

Order of Planting to Get Earliest Crops

Many home gardeners are asking whether it is safe to plant any vegetables in the open while there is still some likelihood of light frosts. To aid these home gardeners there has been worked out the following grouping of common vegetables, according to their ability to withstand spring frosts when planted in the open.

Group 1. Plants not injured by a light frost. These may be planted as heavy frosts are over or usually as soon as the soil can be put in good condition. Cabbage, Irish potatoes, early peas (smooth types as distinguished from wrinkled), onion sets, salad crops, such as kale, spinach, mustard. At the same time start in seed boxes in the house or hotbeds tomatoes, eggplant, peppers, Cauliflower.

Group 2. Vegetables which should be planted only after danger of hard frost is over. Lettuce, radishes, parsnips, carrots, beets, wrinkled peas, early sweet corn.

Group 3. These should be planted after all danger of frost is past: String beans, sweet corn (late varieties). A few early tomato plants may also be set out, but care should be taken to protect them from any sudden chilly weather, by providing a shelter of newspapers, boxes, etc.

Group 4. This group should not be

planted until all danger of frost is past and the ground has begun to warm up. Included in this would be cucumbers, melons, squashes, pumpkins, Lima beans, tomatoes, eggplant, peppers. Plants of tomatoes, eggplant and peppers which have been grown in boxes or hotbeds should be ready to set in the open at this time.

Make Every Acre Work This Year

Every possible acre should be set at work—there's no danger of over-production this year. A hungry world is waiting for American foodstuffs. "Whether for internal peace and industry or against foreign foes, a prosperous, profitable agriculture is the best armament," says the Banker and Farmer, and continues: "It is not believed that our land is producing half what it could under more scientific methods whose worth have been demonstrated. Every banker in the United States should co-operate with the farmer, who has a patriotic, as well as profitable duty to increase his production of foodstuffs this year."

In a recent bulletin, The National City Bank of New York says: "With reserves exhausted, and the world situation what it is, there is no danger of over-doing production, for the largest possible crop in this country is certain to bring remunerative prices. It must be remembered that if the war ends at any time before the crop of 1918 is harvested there will be a great demand from Central Europe on the crop of 1917."

For best results, these extra acres must be well-fertilized. In the words of a close student of the fertilizer question: "The difference between intensive farming and ordinary farming is the difference between bumper crops and lean crops, between progress and poverty, in short between success and failure."

Good seed, thorough preparation and persistent cultivating are other details that

who used the original machines. The farm bureau should collect and use the highly valuable experience which often lies within reach of its office—the experience of successful poultry men, dairymen, fruit growers, and men who are making money on their crops.

As a part of the machinery of university extension the farm bureau can give direct help to its community. To keep before the farmers of its community the progress strong minds are making in agricultural science, and in all those activities engaging men and women of the country. "Certainly," says Mr. Strivings, "the farm bureau can keep alive a propaganda of rural education toward ideals which can not be hoped for as an immediate attainment."

Marketing the Strawberry Crop

The result of a detailed study of the marketing and distribution of strawberries has just been published by the U. S. Department of Agriculture as Bulletin No. 477. The material for this report was obtained in the season of 1915, but much of the information contained in it is believed to hold true year after year.

The investigators found that with the increase of the importance of the industry more elaborate methods for the disposal of the crop have become necessary. Practically every important producing section has one or more important marketing associations. These organizations relieve the grower of many of the details connected with the disposal of his crop, and in some cases even maintain a labor bureau for securing the much needed help during the picking season. In certain cases, too, a number of local organizations by concerted action have secured a high degree of uniformity in the grade and pack of the berries, which is reflected in the better price obtained on the markets.

The expenses of these associations may be classified into certain well-defined items, viz.—the salaries of the manager, the other officers, the inspectors, and the necessary help, the rental or taxes on loading sheds, depreciation of the property belonging to the association, the stationery, postage, telegrams, and other miscellaneous items. The money to meet these costs is secured either by charging the grower a fixed sum per crate or else a certain percentage of the gross returns. Frequently there is a surplus which is refunded to the members after the shipping season is over.

Another difficulty that has increased with the development of the industry and the growing practice of shipping strawberries over long distances is the scarcity of labor at picking time. In order that the berries shall reach a distant market in good condition, it is necessary to pick them regularly and at the proper time. The demand for pickers is, therefore, very great. On the other hand, idleness, due to a few rainy days, may cause the pickers to migrate to another section, causing considerable loss to the growers they leave. To offset this tendency, the report suggests that pickers should be guaranteed a minimum number of working days within the limits of the normal harvesting season.

In 1915 the heaviest shipments took place between May 10 and May 26. While this may be a little later than the average, it is probable that in most years the strawberry movement will reach its height about this time. During this period growers in Norfolk, Virginia, in the Carolinas, and in Tennessee, three of the most important producing sections in the United States, make their heaviest shipments.

New York and the district around it received more car-loads of strawberries than any other city. Chicago came next, Boston third, Cincinnati fourth, Pittsburgh fifth, and Philadelphia sixth. The relatively small number of cars of strawberries shipped to Philadelphia is accounted for in part by the fact that this city receives large quantities of strawberries from near-by districts which are shipped in less than carload lots. Many small towns, the report says, which do not now receive full carloads of strawberries would probably be turned into profitable markets to the advantage of both the strawberry grower and the consumer.

I have been a reader of your magazine for about three years, and would not like to be without it, as it is made up of sound, and helpful reading for any member of the farm. —Elias G. Hess, Pa.



A Fine Crop of Onions Between Rows of Peaches

planted until all danger of frost is past and the ground has begun to warm up. Included in this would be cucumbers, melons, squashes, pumpkins, Lima beans, tomatoes, eggplant, peppers. Plants of tomatoes, eggplant and peppers which have been grown in boxes or hotbeds should be ready to set in the open at this time.

In order to insure a steady supply of vegetables, crops like peas, beans, and lettuce may be planted every three or four weeks, whenever the space is available. Some of these can be planted in the spaces made available by removing the other crops. It is better, the specialists say, to select half a dozen crops which the family likes than to grow 15 or 20.

Plenty of Sunlight Necessary

No amount of fertilizer, watering and cultivation will make up for the absence of sunlight in a garden. Home gardeners should consider carefully how many hours a day any part of the garden plot is in shadow from buildings, fences, or trees. At least 5 hours of sunlight a day is necessary for a successful garden. The more sunlight they get the better it is for most vegetables. For this reason it is bad practice to put plants of low habit between tall-growing plants which will shade them for the greater part of the day. As a rule, foliage crops such as lettuce, spinach and kale do fairly well in partial shade, but even these must have sunshine 2 or 3 hours a day. In laying out the garden, therefore, use shadier parts for such plants and reserve

must be carefully looked after if we are to make the most of our opportunity. Now, let's all buckle into the spring work with a will but go careful with that soft team.

What Farmers Want From Farm Bureaus

There are three tasks to which the farm bureaus must devote themselves, in the opinion of S. L. Strivings, president of a Western New York farm bureau. The farm bureau must act as a leader in all agricultural activities of the community; must serve as a clearing house for gathering and disseminating agricultural knowledge; and must foster the spirit of community progress.

According to Mr. Strivings, the farm bureau must lead the way towards progress and efficiency through co-operation—"they can be heralds in summoning the best in the country to its self-betterment." Some of the movements in which the farm bureau may play an important part are: Education, community betterment, religious education, rural health, efficiency in community work, and rural conservation along many lines.

As a clearing house for agricultural knowledge Mr. Strivings thinks that the farm bureau can make use of the "experiment stations" near at hand—the experiment fields of men who have made good in their community as farmers. He pointed out that many improvements upon agricultural machinery were made by the men

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prepaid.

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nial cherry seven or eight years old and
about five inches in body diameter?

5. Our climbing Meteor rose has full
large buds each spring, but they gum so and
fail to open nicely. Is it a form of gum-
roses. What is the remedy?—F. G. Miller.

My lady friends say that aluminum
makes desirable and safe stew pans,
but they do not recommend allowing fruits,
etc., to stand in any kind of metal dish.
Porcelain and granite ware make excellent
dishes for stewing and the product can re-
main in porcelain and granite ware without
danger.

2. The Shiawassee apple is a sister to the
Fameuse or Snow apple, and to the Princess
and McIntosh. Shiawassee is highly attrac-
tive as a dessert apple, white and tender
fleshed, juicy, mild sub-acid, a reddish apple
but not as deep red as McIntosh. It is a
hardy apple.

3. Ben Davis and Gano are similar in
quality and appearance. I am not familiar
with Arkansas Black or the Black Ben Davis
but my suspicion is that they are not of high
quality.

4. The Bing cherry can be budded or
grafted as easily as any other sweet cherry.

5. I know of no remedy and have no ex-
perience with such gumming.

Soap as a Remedy for Borers

The undersigned subscriber of
your highly esteemed journal
would like to have information on the
following point: The refuse of a soap
factory is available. An acquaintance puts
the refuse of home-made soap at his peach
trees and washes the stems with the same.
He claims it to be a sovereign remedy for
worms. His trees are certainly thrifty and
excellent bearers. Would it be advisable to
apply the refuse of the factory to the peach
trees? If so, how much to a tree?—M. S.
H., Pa.

If the refuse of this soap factory
contains potash, as we would naturally as-
sume to be the case, the refuse will be a val-
uable fertilizer for almost anything or every-
thing that grows, but particularly for fruit
trees including the peach. The refuse might
be strong enough in potash to injure plants

or trees if applied too freely, but the proba-
bility is that it is not strong enough to injure
them, which can only be learned by experi-
menting. It might be that an application of
this waste material to the trunk of the trees
might ward off insects such as the fly, whose
eggs produce the white grub which is so in-
jurious to the roots of peach trees. My as-
sumption is, that a well regulated soap fac-
tory would not allow a serious waste of pot-
ash in the refuse but that it would be almost
impossible to extract every particle of this
valuable fertilizer.

What Strawberries to Plant

Have two acres of creek flats sowed to
wheat. I have thought of plowing under
one-fourth acre of it and setting it to straw-
berries. Will you kindly tell me what you
think of the plan and what kind of straw-
berries you would plant. The soil is a sandy
loam. Also how many plants will it require
and the price?—H. M., Pa.

If you have other good soil on your farm
I would not plow up an acre of wheat which
is thriving well and likely to give a good crop
next year. The only objection I see to the
spot you have picked out is that the land is
low. Notice that late spring frosts are far
more serious on low lands than on knolls,
side-hills or uplands. If I could have my
choice for a location of a strawberry bed I
should select the surface of a hill. Even an
elevation of 4 or 5 feet will save a strawberry
crop.

It takes about 5,000 strawberry plants
for an acre planted 3½ feet apart between
the rows and 18 inches apart in the rows.

The Corsican, Senator Dunlap and
Brandywine are deservingly popular varie-
ties. If you have had no experience in grow-
ing strawberries I advise you to plant a few
next spring, say 1,000 plants or 500, and en-
large your plantation from plants of your
own growing.

General Advice

Having enjoyed and profited by
the "Fruit Grower" many times the
past three years I wish to thank you
for the benefit derived. We have only a
small suburban home (75x175 ft.) but on
it we have forty-eight fruit trees including
a dwarf pear hedge of twenty-six or more
trees and also a grape arbor fifty or more
feet in length. In fruit, we have peach,
plum, sour cherry, quince, apricot, dwarf
apples (2) and persimmon.

Now we are disposing of two Rose of
Sharon persimmon (from another part of
the yard) and we would like to place an
English Walnut on the other site but would
like to know what variety is best—quality
and hardiness considered—and at what age
it will bear. Would like a variety that will
bear in four or five years (if only a few) pro-
viding quality and hardiness are equal. We
are only twelve miles from New York City.

We have a dwarf Northern Spy on Para-
diser stock—at what age should it begin to
bear? I have read twice lately of cases that
did not bear till six to eight years and then
only two or three apples.

How should plum trees be pruned in a
general way?—Mrs. G. S. P., N. J.

The English walnuts grown in this locality
are not grafted. They are seedlings and
supposed to be much harder than grafted
varieties. They bear fruit abundantly but
cannot be expected to bear at a very early
age. English walnuts are an interesting
novelty. A neighbor living across the road
from me has a large tree of this walnut grown
from seed without grafting and it bears
abundantly every year. It is a very large
tree.

Spy apple does not come into fruiting as
early as Wealthy, McIntosh, Fameuse and
many other kinds. It is difficult to predict
just when an apple tree will come into bear-
ing.

Plum and cherry trees should not be
pruned much, as they may be injured by
pruning, whereas apple and pear trees are
not easily injured in pruning.



A Correction

In the February number of Green's Fruit
Grower on Page 37, we said that "The Ap-
ples of New York" could be purchased from
J. B. Lyon & Co. at \$5.00 per set. Since
this was published we have found that this
information is not correct, and we therefore
give below the correct information as to the
price and place of purchase of this valuable
set of books.

"The Apples of New York," by S. A.
Beach, assisted by N. O. Booth and O. M.
Taylor is published in two volumes, con-
taining 769 pages, profusely illustrated with
colored plates and photo engravings. Pri-
per set, two volumes, \$2.25 delivered. They
should be ordered of the Commissioner of
Agriculture, Albany, N. Y., and payment
made by express or postal money order, or
New York Draft, payable to the Treasurer
of New York State.

Every Man His Own Gardener

Spring is being welcomed with open arms
this year and the mild weather is going to
have the tendency to make the man with
extra garden or lawn space think. With
food prices at the present height all save the
"rich people" are very much perturbed. The
live is quite a problem. Do you recall the
time when you bought potatoes for \$1.00 a
bushel? Now they are \$4.00 and still going
up. The same comparison of prices could be
made of other table necessities, such as tri-
nips, cabbage, lima beans, onions, lettuce,
spinach and in fact everything that is fit to
eat, to say nothing of what we have to wear.

Hence a suggestion has been made—and
same is receiving considerable attention
throughout the country—that every man be
his own gardener. This suggestion may
seem absurd to the city fellow with his 2nd
yard, but to the man with larger premises
of the suburbanite, it sounds good. In fact, it
is being tried by many, and prominent agricul-
turalists recommend the idea.

Mr. C. E. Carrothers, Deputy Secretary
of Agriculture of Pennsylvania, says it is
surely a solution to the high cost of living
problem. He says all available space should
be utilized. Portions of large yards should
be planted with vegetables. He says, in
even the large cities most of the back-yard
are large enough for the raising of enough
vegetables to keep the family through the
winter.

In one of the larger cities out West, the
estate men and the city authorities are
pledging support to the movement. They
even advocate putting the idle hands to
work on all vacant lots and cultivate them.

Some pessimists will no doubt cry out
"the ground is not suitable." But that
only a drop in the bucket, it can be made
suitable. Besides, it doesn't take the richest
soil in the world to grow vegetables. The
next time you take a walk, look about you
and see the back-yard gardens, the growth
of which is similar to your back-yard.

One mischievous boy will break up
school.

One false alarm will create a panic.

One hasty word will lead to a divorce.

One false step will cost a life or ruin a
character.

One broken wheel will ditch a train.

One quarrelsome worker will create a
strike of ten thousand men.

One undiplomatic word will provoke a
war involving thousands of lives and the
destruction of millions of property.

One hasty act of legislation will en-
tail untold hardships.

One match will cause a conflagration.

One wayward daughter will break
mother's heart.

One lie will destroy a woman's reputa-
tion.

One false witness will send an innocent
man to jail.

One demagogue will turn factories into
soup-houses.

Let the People Think!—"Lester's Wel-
ly."

The Horse Did It.—After the death
Guy Cressey, a milkman of Westbrook,
Maine, no one knew his milk route, and
was not until Mr. Cressey's horse, who
had traveled the route for five years,
hitched up and permitted to have a
rein that the course was discovered; the
horse made the trip and stopped at the door
of every customer except one.

Cultivating Apple Orchards

By J. S. UNDERWOOD

There are three ways of caring for the orchard soil. They are the cultivation and cover crop method, the sod mulch method and the half sod mulch method. Neglect of the soil in the orchard is not a method but rather a lack of method and should not be confused with any of the methods I have just mentioned.

The sod mulch method has some strong advocates and in some locations is no doubt the best method to be used. Such locations are those that have a plentiful supply of soil moisture and where plenty of mulching material can be obtained. Hillsides that cannot be easily cultivated and are liable to wash may also be sod mulched. The sod mulch method is the exception rather than the rule. In practicing it, it is important that care be taken to do it thoroughly. Many prominent practitioners of this plan do not mulch their trees as well as they ought to be. The mulching material should be put on thick enough under the trees to kill out all growth of grass or weeds as far as the spread of the branches of the trees extend.

The half-sod mulch system is practical for those who believe in cultivation but have hillside orchards that are too steep to permit cultivating the entire surface of the orchard soil. It is a combination of the sod mulch method and cultivation, a strip of sod four to six feet wide being left in the tree row and the remainder of the space being cultivated and sown to cover crops. The strips of sod should be left at right angles to the general flow of the water. The sod portion should be given the same treatment that is given

established and plowing cross-ways would be an unnecessary cutting of the roots. The ridges caused by the plowing can be worked down to a great extent with the cultivating tools. When the disc is used ridges are not made as is the case when the plow is used and the ground may be disced both ways and kept more level than when plowed.

This early cultivation may also be important for another reason where cover crops are grown and that is that in the spring after the cover crop has attained some size and is growing rapidly it uses an enormous amount of moisture that should be available to the trees. Of course, if the soil is in need of humus the cover crop should be allowed to grow longer than where vegetable matter is not lacking and especially in a rainy season, but it is well not to permit the crop to remain on too long. The small rootlets of the tree grow quickly and become entwined with the roots of the cover crop after a short period in the spring. The plowing down of the cover crop breaks up this root formation and thus cuts down the drinking and feeding capacity of the tree. Early spring plowing would avoid in whole or in part this disturbance to the root system.

The tools to be used in cultivating the orchard should be determined by the kind of soil in the orchard. Any tool that will work the soil up well is suitable. There are several cultivators that are made for orchard cultivation especially that will quickly and conveniently keep the soil in a nice dust mulch after it has been worked down in the spring. Extension discs and cultivators are

from the Christian Union Herald which you may enjoy reading. The thought of planting for others impressed me very much. I think the first thing I can remember is being given a little seedling apple tree and how I carried it home in my pocket and planted it. I have planted trees occasionally all my life (52 years) and yet I am not now so situated as to eat the fruit of any of them.

Yours Respectfully,
J. L. K.

The Pear Tree at the Old Parsonage

The daughter of a minister relates some of her father's experiences as the pastor of a country church. Among other things, she tells of his being engaged one day in planting a fine young pear tree, when one of his parishioners came up, if the truth must be told, with something of pity in his countenance for the supposed ignorance of the new incumbent. Farmers are apt to suppose that a young man who has studied in the college and the seminary cannot know much outside of them.

"How long before that tree will bear enough pears to pay you for the planting?" "Some ten or twelve years, perhaps," was the pastor's reply.

"That's a long time to look forward. Do you expect to eat its fruit?"

"I trust so. I do not know; but if we do not, some other minister of God will. If my predecessor had been as thoughtful, we might have been enjoying these luxuries."

"I do not believe," he added, "that any act of kindness is ever wasted. This pear tree may not bear fruit while I live here, or I may die before its bearing time, but it will supply its luscious fruit for years and years to come to some faithful minister. It may



Cultivation Should Start as Early in the Spring as Possible

sod mulch method. The advantages of this system are that it prevents washing of the soil and also gives all the benefits of an cultivation.

The cultivation and cover crop method is generally accepted as the best plan of caring for the orchard soil. Without a doubt it should be practiced in the great majority of cases. The principles underlying the reason for cultivating an orchard are the same as those underlying the reason for cultivating any crop. The conservation of soil moisture, the destruction of weeds and the aeration of the soil to hasten the process of making the plant food available are important to the benefit of the orchard. The small hair roots that are near the surface are the main feeders of the tree. Most of the plant food is in the first few feet of the soil. It is necessary therefore to make conditions such that this plant food is made most easily and readily available to these tiny roots near the surface. This is best done by proper cultivation.

Cultivation should start as early in the spring as possible and should at least be started by the time the blossoms fall. The moisture from the spring rains should be conserved as much as possible. Plowing is generally advisable as there is usually some growth of the cover crop sowed the past fall that the plow will handle better than any other kind of implement. If, however, there is not much growth disking is preferred as work can be done quicker and the disc will not cut the roots as easily as the plow. Plowing is done it should be done as shallow as is consistent with good turning under the green stuff. The plowing should always be done one way as the roots become

very desirable in orchard work because of the nearness to the tree that they can be worked.

The ground should be kept in a good dust mulch condition until about the middle of July or first of August when it should be sown to some cover crop. In dry seasons the cultivation may be continued a little longer than in good growing years. It is very seldom a good plan to cultivate after the first week in August. It is very essential to stop soon enough to allow the trees to stop growing and thoroughly harden up their wood before the winter sets in. As a general thing cultivation should be discontinued sooner on young fast growing trees than on older ones. Young trees are most liable to carry immature wood into the winter and suffer from winter injury as the result. It pays handsomely to give the soil of the orchard the best care possible.

Planting for Others

The letter below, together with the article "The Pear Tree at the Old Parsonage" which came with it, contain such a good suggestion that we take this opportunity to pass them along to our readers.—The Editor.

Mr. Charles A. Green,
Rochester, N. Y.,

Dear Sir—In renewing my subscription I wish to assure you I appreciate your paper very much and wish you many happy and prosperous years.

I especially enjoy your "Walks and Talks with Readers." I enclose a clipping "The Pear Tree at the Old Parsonage," taken

give nourishment and strength to other pastors and their families, long after the grass is growing on my grave."

"Besides," added Mr. Thorn, "we should remember that we have all our lives been eating fruit planted by others. Let us do as much for those who shall come after us. My children may be scattered abroad, and may never taste the result of my forethought, but they will eat fruit somewhere. I plant in faith, and leave the rest to God."

So the pastor, when his hour of relaxation from his studies came, planted and planted, here a choice scion, there a rare graft, until almost every field on the little farm was bordered by fine fruit trees. He did eat of the fruit of his labors, and his children after him. Yes, many a bushel of the fruit of that very pear tree was put away for winter's use. And he diffused a taste for that species of arboriculture during his long residence among his numerous flock, until the country around became like a garden.

"Do you remember the conversation we had once in my garden?" asked Mr. Thorn of the old elder just referred to, one winter evening at the parsonage.

"Indeed I do," was the reply, "although I thought you very visionary at the time. For all that I considered you so, I was the owner of my home, and I began the next week and planted a variety of trees in my own garden, and they are all bearing nicely."

"Well," said the minister, "these fine pears grew on that very tree, and I have eight bushels more stored away in bran for winter's use."

You will lose a year on roses unless you plant them this spring.

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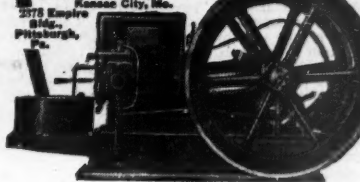
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Classified Advertisements

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Flowers for The Garden

By EVELYN KELFORD

I wonder, if at times, we forget the part which the beautiful was meant to play in our lives.

And one of the most alluring ways to make the beautiful real, is through the world of flowers. Bygone generations set their seal of approval largely on flowering shrubs. As one rides through the rural districts, there is hardly a homestead, however unpretentious, but has its lilac or syringa and the shrub habit has not been forgotten in these modern days, as weigelas, spireas, magnolias, snowballs, altheas and forsythia are able to testify.

Those of us who possess orchards may view a magnificent spectacle during the blooming season. Fragrance and beauty are shed abroad in the land. Our souls drink it in ravenously. Gladly would we have them linger with us, but as the petals fall, we are reminded that we need a garden to supplement the season of bloom.

As the warm spring days advance, it is delightful to get outside and renew our acquaintance with the outside world. We note the warmth and mellowness of the rich brown earth, as the spade turns it over. Personally, I like to prepare the grounds myself, when the garden area is not too large, and I have time and strength for it. In the cool latitudes it is better not to plant the seeds too early. The planting period is later, too, than it was say thirty years ago—varying from two to four weeks. I have found that plants make a better growth and mature more quickly if seeds are not sown until the warm days come, with the exception of some hardy varieties, like cosmos.

Pansies bloom better during the cooler days of spring and fall but require warmth to start them as well as an abundance of water and very rich soil. So we gather from this that it is wise to plant the seed in the summer, watering if needed. They will blossom in summer, of course, but the luxuriant growth and larger flowers are saved for the days when the heat is not so intense.

Morning glory seeds are rather hard to germinate, especially if the seed goes into the ground too soon. But their bright, smiling faces are a pleasant sight for us, as they peep in the kitchen window, while we wash the breakfast dishes. Climbers and trailers are very useful. We have all seen how bravely nasturtiums go to work to hide unsightly stone heaps or decrepit fences. The white clusters of the Madeira vine are not so often seen, but they are pretty as is the cypress vine with its pale green fern-like foliage and tiny trumpet shaped flowers of red and white. Cobea or Cathedral Bells is another graceful climber—for which wire netting forms a good support. The leaves of cobea are especially worthy of notice. Place seed edgewise to germinate. Wild cucumber vine grows easily and affords good shade.

Wisteria is popular with many. The light purple panicles add a pleasing change to the color scheme. Clematis paniculata is widely grown and deservedly so. It grows slowly with me but is a very thrifty plant and apparently free from insect pests. When its starry white flowers appear in August, we feel grateful to the good man who erected the trellis—for the benefit of both wife and vine.

As for the flowers which do not climb, there is an extensive list from which to select. Sweet alyssum, anchusa, mignonette, balsams, calendula, yellow chamomile, verbenas, sweet sultans and evening primrose are easily grown. Most of the above bloom quickly, which is gratifying to the one who cares for them. Anchusa or Cape Forget-me-not, resembles its namesake, but the flowers are of a dark blue and larger. Verbenas, perhaps, need a longer time to establish themselves. They stand dry

weather fairly well. Sweet Sultans are soft and fluffy. Swan River Daisy or Brachycome in the catalogues grows about six or eight inches high, bearing small blue and white daisy-like flowers. It is easily cared for. Astors succeed well almost everywhere, repaying abundantly for time expended. Aster Violet King is an excellent strain for those who like a bed of one color flowers. The blossoms are compact and a lovely shade of violet blue.

Heliotrope, with its inimitable fragrance! Who could resist it? In Southern California it makes novel and attractive hedges. So do roses and geraniums. It climbs to the second story windows, a trait unknown to its eastern sister, though its delightful perfume and beautiful deep purple flowers are beloved by all. Well is it the symbol of devotion.

All flowers are beautiful and worthy of our whole hearted admiration.

I must tell you a story about a pansy bed, which was made under difficulties, several years ago.

It was in New Mexico and our tent-houses were pitched on a hill. The empty space between the two tents, I determined to convert into a flower garden. The crusty earth was dug up with a pick-axe. The ground was very hard and lumpy, lumps being about as hard as stones. The digging process was repeated, and the stony lumps discarded. The soil was made with horse dressing, it being thoroughly incorporated with the original earth. That year the pansy plants died, which, perhaps, was not strange. The morning glories lived and bloomed, however, and a few straggling sweet peas. A hail storm killed the young poppy plants. The next year the same

process was repeated in soil preparation; the pansy bed was made especially rich. It was kept moist. The first year, water was tugged up a hill, the second the hydrant was but a few feet from the garden. The plants were watered after sundown. A special drenching given to them which was necessitated by the dry atmosphere. When the baby plants seemed liable to perish from the rays of

the semi-tropical sun, a canvas was stretched above them. This, too, was wet at intervals. The blossoms were beautiful velvety ones of blue, purple, brown, yellow, white as well as color combinations. The blossoms were not so large as some I have raised since in the East, but they were a delight to me—and as one neighbor—a Scotchman said—"It was good to see a bit of green about."

To return to our garden, the list may be indefinitely extended. It would be a good idea to start some perennials now, so that they may be ready to bloom another year, minus the labor of planting. One packet of Sweet William seeds—yielded over forty fine, healthy plants. They bloomed in great profusion and combination of coloring—Phloxes, iris, daisies, carnations, delphinium, coreopsis, columbine, forget-me-nots and hosts of others claim a place in our hearts, as well as gardens. The little tots love flowers. I have in mind one little fellow who would toddle about the dooryard, cooing over the posies he found—perfectly contented. They were his loved and ideal companions. His little sister found a wild rose, beautiful indeed to her, which she brought to show to "mama."

And in the care and cultivation of our flowers—we children of an older growth—may make for ourselves a more congenial atmosphere. It is interesting to watch the habits of our flowering treasures and the conditions under which each thrives best.

This enriches the mind—broadens the mental vision, enabling us, to perceive something worth while outside the "four square walls."

It is a healthy pastime, and brings us in

contact with the world of nature, which is a happy one. We forget household cares and burdens.

Our blossoms give freely and upbraid us not.

BILL TO REGULATE PEACH PACKING

Lattin Measure Provides for Four Grades

The Lattin bill which amends the state agricultural law in relation to the grading of peaches is to be reported out of committee on April 4th. It was introduced on March 3d. The bill is of much interest to fruit growers in Western New York and along Lake Ontario. Copies of the bill are now obtainable either through the respective assemblymen or Farm Bureau managers and suggestions are invited.

In the Ontario section of this state about five thousand cars of peaches are shipped each year to all points of the United States and in the past to England as well. The bill is intended to standardize peaches to the advantage of the grower, the commission merchant, the dealer and the consumer.

Graded in Four Classes

Under its provisions peaches are to be graded in four classes. The first will be extra fancy and must consist of one variety which are to be well grown specimens, hand picked, properly packed, normal shape and free from dirt, disease, insect and fungus injuries as well as bruises, except such as might necessarily be caused in packing. The first grade are to have a minimum size of not less than two and one-half inches.

The second grade calls for peaches that are well grown, hand picked, properly packed and practically free from dirt, diseases, bruises and other defects, and having a minimum size of not less than two inches. The third grade consists of peaches that are hand picked, properly packed, practically normal in shape and free from dirt, diseases, bruises and other defects except those caused by packing and with a minimum size of not less than one and one-half inches.

Severe Penalty Provided

The fourth class will include all peaches not conforming to the three previous specifications or if conforming, not branded in accordance. The bill sets forth the method of measurement and a number of other important features in connection with the packing and marking of the fruit. A penalty of from \$25 to \$50 for the first violation, and from \$50 to \$100 for a subsequent violation for misbranding provided.—Rochester Democrat and Chronicle.

When My Old Lawn Failed to Grow

By Rich Lucas

Last spring I reseeded my lawn as it was getting too thin but it did not do very well, altho I watered it regularly and raked the lawn several times. The grass, altho it gave it good treatment did not respond. Being a poor light growth of a sickly yellow color. I began to think I would have to go on a lot more seed to get a thick turf, but ever, I thought possibly the plant food becoming exhausted in the soil so decided to fertilize the grass. Knowing nitrogen was the element that produced growth, I was exactly what I desired, I obtained nitrate of soda and put it on broadcast, using at the rate of about 200 pounds per acre. This evidently was exactly what the grass required as it was only a week or until it came out a dark green color. Growth started readily and after a few frequent clippings I soon had a good turf of a dark healthy green color. I am convinced that all that was lacking with my lawn was a deficiency of nitrogen in the soil for as soon as I supplied the grass took on a healthy color and grew rapidly and luxuriant.

For lawns that are not growing where the grass has a poor color I would recommend a trial application of nitrate of soda as it certainly was the making of my lawn.

There was a man in our town

Who labored to rise higher;
To rise and then to rise some more
He always did aspire.

He smoked within a powder mill
And won his whole desire.

—Richmond Times-Dispatch

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Green's Fruit Grower

How the Farm Was Turned to Small Fruits

By F. H. SWEET

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ter the wagon had rattled beyond
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ing housework, then went and looked
the late set hens and tried to count
inter-crossing chickens. When she went
she churned, then took a well-thumbed
ant book from a drawer and turned its
with a dejected manner that suggest-
pretty thorough knowledge of its con-
green color

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oin' back ever year," she said aloud.
ally, as she slid the book back
the drawer. "This year's worse than
but the land knows I work hard
ch. Up at five an' often not to bed
or 'leven. When Marcus came he
twas a grand good place for small
sellin', rich land an' right close to
so, an' it seemed to me that way,
t'would be garden sass instead of
Everybody eats garden sass, an'
didn't give a cent for the red rozb'ries
up so far, an' they spile go quick,
Marcus he came straight from a real
et sellin' place an' knows all about
n', but as he's real fond of eatin'
he feels others must be the same way.
his only fault, though, for he's a
worker. I can't understand why we've
Deborah Brooks told me carrots
well, so I've always planted a lot; an'
Tucker said she loved parsnips

better'n anything from the garden, an' for
me to be sure an' grow a big mess. I did
that, too. Women know more 'bout such
things than men. An' I've grown rows an'
rows an' rows of parsley. The market
buyer himself told me to be sure an' grow
parsley, for he'd want a few bunches every
now an' then. I've did everything that
ought to bring success. But it ain't, not a
single year. An' I've kept close by
Marcus, watchin' an' advisin' on every
thing he did an' not 'lowin' him to run wild
on ideas I didn't approve of, like a full acre
of red rozb'ries an' another in strawb'ries.
An' other fruits the same way. They'd
never sell in all this world. A few boxes
for folks to eat, said I, an' plenty to pre-
serve. But acres! That place where he
worked shipped off to cities. Our straw-
berry bed's plenty big, an' is all the fruit
we want. If Marcus would only sell up
the carrots an' parsnips an' parsley 'twould
make a heap of difference. But he never
will. Mebbe he's a good grower but a
poor seller. Some folks is that way."

She shut the drawer with something very

All this time the short hand of the clock
had been climbing up one side and dipping
over the other. Dinner was always late,
timed to the coming home of Marcus from
his peddling. But that was now come,
and the old horse stabled and fed. Then
Marcus stopped and looked into the
kitchen. Mahaly was not there. But he
could smell something burning, and he went
inside. The water had boiled from the
beans, so he put in more, and he threw open
the oven door to cool the air about the
potatoes, which seemed to be done. After
that he went through several of the rooms
and finally outside, anxious about Mahaly.
Could she be sick?

She was still crouching over the straw-
berry vines. At sight of her the anxiety
of his face gave place to a grim resolution
that had been there when he came home.

"Mahaly," he said abruptly, as he
stopped beside her. "I'm goin' to quit.
No use puttin' you in any deeper. It's
all been a lose out, for which I'm sorry."

He waited a few moments, but she made
no answer. Then he went on, more sharply:

grow small fruits, an' how to pack an' take
care of 'em an' the kinds people want, an'
that's about all—or no, I've got some
knack in persuadin' them to buy, I think."

"Will you take hold ag'in, cuttin' out
the garden sass, an' runnin' your own way,
fruit an' all, to pay."

He looked down at her speculatively.
"I don't know," he answered undecidedly,
—"not 'cept you 'gree to two things first."
"I will—to anything that'll save the
farm."

"Well, then, your pa did a great thing for
me, takin' me in as a boy. He was the best
friend I ever had. Now I've been savin' all
my life, an' when I was at the commercial
fruit farm I got extra good pay, twice what
I've been askin' you. I have enough to
clear off the mortgage, an' in memory of
your pa I want it to go that way. Drivin'
out I decided 'bout this. I'm a big husky
fellow, with no pertic'lar need for money."

"But I—I couldn't take—"
"It's the second condition, though, that's
the real one I'd stay on. You know why I
left the other job?"

Mahaly didn't answer except by an added
color in her face.

"It was to be near you after your father
died," Marcus went on. "An' I sort of
hinted what I'd like, but you didn't seem
to take it kindly."

"I—I've always been scared of men,"
Mahaly confessed.
"I couldn't feel sure
that you—loved
me."

"Well, I did, an'
I do. But I don't
want you in pay-
ment for savin' the
farm. You can have
the money, but if
you have me you
must like me for
myself."

Mahaly half rose,
then crouched again
among the vines.
The dish was be-
side her, still empty.

"I—I—" she be-
gun, and finished
with, "Come help
me fill this bowl
with strawb'ries,
Marcus. Then we'll
have dinner. An'
you'd better dig
all them carrots up
an' feed 'em to
the cows. I know
they're good for
that. An' then you
can be turnin' the
ground into-fruits."

The very next
year the farm com-
menced to pay.

Borrowing Money

We are continu-
ally warned and
have been through-

out the past not to borrow money,
not to go in debt, and yet there are thous-
ands of people in every community
borrowing money, agreeing to pay high
rates of interest. For the most part this
money is borrowed to buy clothing or to
carry the individual a few weeks or months
longer in some enterprise or extravagance.
The borrower generally speaking does not
know how he or she is to pay the debt.
This is a fatal condition.

If money is borrowed considerably for a
worthy purpose and with a definite knowl-
edge that the loan can be paid at a certain
date, it may be a good piece of business and
profitable. We have in this city a depart-
ment store which may have a capital of
millions of dollars. This firm is very
wealthy, owning the extensive block it
occupies, and still this profit-making con-
cern borrows money every year in large
lots and makes money in so doing. This
firm knows that it can meet its notes when
they are due. Their credit is so good that
their notes are readily cashed in New York
city even though they represent hundreds
of thousands of dollars, therefore, we should
not say do not borrow money, but we
should hold firmly to the thought that we
should not borrow money thoughtlessly or
needlessly or for extravagances.—C. A.
Green.



"The Next Year the Farm Commenced to Pay from Small Fruits"

like a groan, put some potatoes in the oven
to be baking for dinner, and some beans
in a kettle of water on the stove for the
preliminary softening that goes before
baking, and then went out.

The big garden with its luxuriant patches
and lines of thrifty green, and the farm
fields beyond, looked good to the one who
had lived there all her life. Moisture
gathered in Mahaly's eyes.

"Hard if it has to go," she thought. "But
pa left a mortgage on the place, an' now
I'll have to put on another to pay Marcus
the pretty near two years I owe him, an'
they do say it's two mortgages an' out.
I'll pay off Marcus an' let him go—though
that'll mean sellin' the old horse an' a cow
an' givin' up the sass sellin', for I couldn't
manage everything by myself. I'll just
keep on with the chickens an' eggs, an'
try to sell a few things, an'—an' that makes
me think I'd better pick some strawb'ries
for Marcus's dinner, he likes 'em so."

"I do hate to let him go, though," her
thoughts went on, after she had squatted
down in the strawberry bed. "Him an' me
went to school together, an' he's worked for
me three whole years. An' though he never
speaks a word of advice these days, nor
contradicts a thing I do or say, he's steady
an' reliable an' a great help. An'—an'
he's got over the foolishness that rose be-
tween us."

"An' now that I've quit, Mahaly, I'm
goin' to have a little say. You're consider'ble
of a 'pinioned woman, an' you sort of
hedged my ideas from the first. Then two
years ago you gave it to me flat that you
didn't want any more of my advice or crazy
notions, an' that you'd run things in your
own safe way. I told you all right, that I
wouldn't give you another word of advice
so long as I was your hired man. An' I
ain't. Since then things have been run
by Deborah Brooks an' Alzady Tucker an'
fools like that, not by you. It ain't what
one wants to sell, but what people want to
buy. Carrots an' parsley an' such things
are all right, just a few bunches to use in
soups mebbe. But you put in reg'lar fields
of 'em, an' kept out of growin' small
fruits that I know would do fine. I did
the best I could with your stuff, but no man
in the world can sell what people don't
want, an' keep on sellin' it."

He waited again. But still she didn't
speak. He drew nearer, then, in utter con-
sternation:

"Why, Mahaly Briggs! Cryin'! Wh-
what's the matter—sick—what I said?"

"N-no, I—I was cryin' long 'fore you got
back, Marcus. All foo-foolishness, but I
got to thinkin'. Do you truly think the
place could be made to pay, in your way?"

"I know it could," confidently, "pay big,
just like I told you first. I know how to

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